New Series, Vol. X January, 1935 No. 1

THE CLEMSON AGRICULTURAL COLLEGE

RECORD

FORTY-SECOND YEAR

CATALOG NUMBER

1934 - - 1935

ANNOUNCEMENTS 1935-1936

Published quarterly by the Clemson Agricultural College, Clemson College, S. C. Entered as second class matter April 25, 1905, at the Post Office at Clemson College, South Carolina, under the Act of July 16, 1894, now superseded by the Act of August 24, 1912.

1935

JANUARY

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COLLEGE CALENDAR, SESSION 1935-1936

1935

Entrance Examinations.....September 9 and 10

Matriculation and Registration, new students.....September 11
8:00 A. M. to 6:00 P. M.

First payment due Treasurer, new students.....September 11*

Matriculation and Registration, upper classmen.....September 17
8:00 A. M. to 6:00 P. M.

First payment due Treasurer, upper classmen.....September 17*

Second payment due Treasurer, all students.....November 21*

Thanksgiving Day (holiday).....November 28

Christmas Holidays begin at 12 Noon.....December 21

1936

Christmas Holidays end at 10 P. M.....January 2

First Semester ends.....February 1

Third payment due Treasurer, all students.....February 1*

Registration, Second Semester.....February 3

Mid-Year Graduating Exercises.....February 4

Fourth payment due Treasurer, all students.....April 1*

Final College Examinations end.....May 31

Commencement Exercise begin.....June 1

Graduating Exercises.....June 3

NOTE: The above schedule is subject to change by the Faculty.

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*Important Note: **Settlement of College Fees.** The Treasurer of the College is the financial officer, and all transactions relating to payments must be made through him. The entrance payment includes the full cost of uniform, plus fees and living expenses for the first quarter, and must be paid before a student can be assigned to a room in barracks. Other payments are due quarterly in advance as indicated above. A quarterly payment deferred by virtue of reason satisfactory to the Treasurer may be extended at the discretion of the Treasurer for a period not exceeding twenty days. At the expiration of this grace period, the names of those in arrears will be automatically removed from the college rolls.

Remittances should be made in cash, by money order, cashier's check, or local check made payable to S. W. Evans, Treasurer, and should be paid at the Treasurer's Office or mailed directly to S. W. Evans, Treasurer, Clemson College, South Carolina.

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*Detailed index may be found on page 216.

BOARD OF TRUSTEES

R. M. Cooper

LIFE MEMBERS Columbia

~~J. E. WANNAMAKER~~, *President* ----------St. Matthews, Calhoun County
W. W. BRADLEY ---------- Columbia, Richland County
A. F. LEVER ---------- Columbia, Richland County
J. E. SIRRINE ----------Greenville, Greenville County
PAUL SANDERS ----------Ritter, Colleton County
CHRISTIE BENET ---------- Columbia, Richland County
T. B. YOUNG ---------- Florence, Florence County

TERM EXPIRES 1938

S. H. SHERARD ---------- Ninety-Six, Greenwood County
BEN T. LEPPARD ---------- Greenville, Greenville County
EDGAR A. BROWN ---------- Barnwell, Barnwell County

TERM EXPIRES 1936

G. W. SPEER ---------- Anderson, Anderson County
F. E. COPE ---------- Cope, Orangeburg County

S. W. EVANS, *Secretary* ---------- Clemson College, S. C.

STANDING COMMITTEES OF BOARD

The President of the Board is ex officio a member of all committees.

AGRICULTURAL: Sherard, Young, Benet, Lever, Sanders, Cope.

(This committee is also the Veterinary Committee, the Crop Pest Commission and the Experiment Station Board of Control.)

EXECUTIVE: Benet, *Chairman;* Bradley, Sirrine, Young, Leppard.

FERTILIZER: Cope, *Chairman;* Sherard, Sanders, Speer.

FINANCE: Bradley, *Chairman;* Benet, Sirrine, Speer, Brown.

STATED MEETINGS OF BOARD

3:00 P. M.—Third Friday in March
3:00 P. M.—Third Friday in June
3:00 P. M.—Fourth Monday in October

BOARD OF VISITORS 1934

J. E. Harley ---------- Barnwell
(Hold-over member)
A. V. Bethea ---------- Dillon
J. R. Connor ---------- Eutawville
S. C. Gambrell ---------- Owings
G. G. Gilmer ---------- Chester
Lewis C. Harrison ---------- Walhalla
J. D. Jones ---------- Union
J. M. Moss ---------- St. Matthews
Dean Pearman ---------- Anderson
Paul Quattlebaum ---------- Conway
Winchester C. Smith ---------- Williston
T. W. Thornhill ---------- Charleston
W. B. Wilkerson ---------- York

OFFICERS CLEMSON ALUMNI CORPORATION

President

W. D. Barnette, '10 ---------- Columbia, S. C.

First Vice-President

L. R. Booker, '25 ---------- Clemson College, S. C.

Second Vice-President

Frank Jervey, '14 ---------- Washington, D. C.

Secretary-Treasurer

J. H. Woodward, Ex. '03 ---------- Clemson College, S. C.

Assistant Treasurer

S. W. Evans, Ex. '02 ---------- Clemson College, S. C.

Board of Directors

W. A. Barnette, '10 ---------- Greenwood, S. C.
W. D. Barnette, '10 ---------- Columbia, S. C.
L. R. Booker, '25 ---------- Clemson College, S. C.
B. P. Barron, '14 ---------- Lexington, Ky.
R. H. Fike, '08 ---------- Atlanta, Ga.
Fritz Furtick, '07 ---------- Salina, Kan.
David Jennings, '02 ---------- New York City
Frank Jervey, '14 ---------- Washington, D. C.
W. K. Livingston, Ex. '98 ---------- Greenville, S. C.
E. R. McIver, '05 ---------- Florence, S. C.
Edgar Morris, Ex. '08 ---------- Washington, D. C.
W. L. Perry, '14 ---------- Columbia, S. C.
T. W. Thornhill, '14 ---------- Charleston, S. C.
A. H. Ward, '14 ---------- Aiken, S. C.
W. B. Wilkerson, '14 ---------- York, S. C.

OFFICERS OF ADMINISTRATION

ENOCH WALTER SIKES, PH. D., LL. D.
President

R. JOHN WEST, COLONEL, INFANTRY
Commandant

SAMUEL WILDS EVANS
Treasurer and Secretary of Board of Trustees

JAMES CORCORAN LITTLEJOHN, B. S.
Business Manager

LEE W. MILFORD, M. D.
Surgeon

GUSTAVE ERNEST METZ, B. S., M. A.
Acting Registrar

HENRY WALTER BARRE, M. A.
Dean, School of Agriculture and
Director, Agricultural Experiment Station

FRED HARVEY HALL CALHOUN, PH. D.
Dean, School of Chemistry

DAVID WISTAR DANIEL, A. M., LITT. D.
Dean, School of General Science

SAMUEL BROADUS EARLE, A. M., M. E., LL. D.
Dean, School of Engineering

WILLIAM HAROLD WASHINGTON, B. S., M. S.
Dean, School of Vocational Education

HORACE HAROLD WILLIS, B. S.
Dean, School of Textiles

THOMAS SAMUEL MOORMAN, B. S., COLONEL, INFANTRY
Professor of Military Science and Tactics

JACOB HENRY WOODWARD
Secretary Board of Fertilizer Control

WALTER KEYS LEWIS, V. S., M. D. V.†
Director of Livestock Sanitary Work, State Veterinarian

WILLIAM WILLIAMS LONG, B. S., LL. D.*
Director of Extension Service

DAVID WAYNE WATKINS, B. S., M. A.
Director of Extension Service

CORNELIA AYER GRAHAM
Librarian

†Office: State Office Building, Columbia, S. C.
*Deceased November 13, 1934.

FACULTY

ENOCH WALTER SIKES

President

M. A. Wake Forest College; Ph. D. Johns Hopkins University.

ANDERSON, ROBERT LOVELL, *Associate Professor of Architecture.*

A. B. Princeton University 1925; Graduate Work Columbia University 1925-26; Harvard University 1929-30.

ANDREWS, FLOOD SHIELDS, *Associate Professor of Horticulture.*

B. S. Virginia Polytechnic Institute 1924; M. S. Michigan State College 1928.

ARCHER, WAINE, *Assistant Professor of Military Science and Tactics, Assistant Commandant.*

Captain, Infantry, U. S. A. Graduate Company Officers Course, Infantry School, 1927. Graduate Advanced Course, Infantry School, 1931.

ARMSTRONG, GEORGE MILLER, *Professor of Botany and Bacteriology*

B. S. Clemson Agricultural College 1914; M. A. University of Wisconsin 1917; Ph. D. Missouri Botanical Garden Washington University 1921.

ASBILL, CLARENCE MONROE, JR., *Assistant Professor of Electrical Engineering.*

B. S. Clemson Agricultural College 1925; Westinghouse Engineering School.

*AULL, GEORGE HUBERT, *Professor of Agricultural Economics.*

B. S. Clemson Agricultural College 1919; M. S. University of Virginia 1928; University of Wisconsin 1929-1930 and 1933.

AULL, WILLIAM BARRE, *Associate Professor of Bacteriology.*

B. S. Clemson Agricultural College 1907; Graduate work University of Virginia 1909-10; Iowa State College Summers 1925, 1927.

*AYERS, THOMAS LAWRENCE, *Associate Professor of Vocational Education.*

B. S. Clemson Agricultural College 1918; M. A. George Peabody College 1929.

BARRE, HENRY WALTER, *Dean, School of Agriculture, Director of Agricultural Experiment Station.*

B. S. Clemson Agricultural College 1905; B. S. Nebraska 1907; M. A. 1910.

BOOKER, LEONARD ROWLAND, *Itinerant Teacher-Trainer and Assistant State Supervisor Industrial Education.*

B. S. Clemson Agricultural College 1925; Graduate Work University of Chicago 1927; M. S. University of Tennessee 1932.

BOWEN, WILLIAM CLAYTON, *Assistant Professor of Agricultural Education.*

B. S. Clemson Agricultural College 1932.
(In Charge Agricultural Education work Central, S. C.)

BRACKETT, RICHARD NEWMAN, *Professor of Chemistry.*

A. B. Davidson College 1883; Ph. D. Johns Hopkins University 1887.

BRADLEY, MARK EDWARD, *Professor of English.*

A. B. Erskine College 1898; Graduate Work University of Chicago Summer 1904, 1910, University of North Carolina Summer 1927.

BREARLEY, HARRINGTON COOPER, *Professor of Economics and Sociology.*

A. B. 1916, M. A. 1917, University of South Carolina; Syracuse University 1926; Ph. D. University of North Carolina 1928; Columbia University Summer 1933.

*On leave 1934-1935.

BROWN, HUGH MONROE, *Professor of Physics.*
B. A. 1920, M. A. 1921 University of Denver; Ph. D. University of California, 1927.

BURTON, WILLIAM WILDER, *Assistant Professor of Mathematics.*
Ph. B. Brown University 1906; M. A. Mercer University 1918.

CALHOUN, FRED HARVEY HALL, *Dean, School of Chemistry and Geology, Professor of Geology and Mineralogy.*
B. S. 1898, Ph. D. 1902, University of Chicago.

CARODEMOS, PETER, *Associate Professor of Chemistry.*
B. S. Tufts College 1922; Ph. D. Cornell University 1927.

CLARKE, ELWYN LORENZO, *Professor of Civil Engineering.*
B. S. in C. E. 1902; C. E. 1931, University of Illinois.

COCKRELL, ROBERT ALEXANDER, *Associate Professor of Forestry.*
B. S. New York State College of Forestry 1930; M. S. New York State College of Forestry 1931; Ph. D. University of Michigan, School of Forestry and Conservation 1934.

COLLINGS, GILBEART HOOPER, *Associate Professor of Agronomy.*
B. S. Virginia Polytechnic Institute 1915; M. S. University of Illinois 1917; Ph. D. Rutgers University 1925.

COOPER, HERBERT PRESS, *Professor of Agronomy.*
B. S. Clemson Agricultural College 1911; M. S. University of Wisconsin 1916; Ph. D. Cornell University 1922.

CRANDALL, WILL GILES, *Professor of Vocational Education.*
B. S. Cornell University 1918; Graduate Work Cornell University Summers: 1929, 1930, 1931.

CREDLE, ALEXANDER BERRY, *Assistant Professor of Electrical Engineering.*
E. E. Cornell University 1930; M. E. E. Cornell University 1931.

CROUCH, SYDNEY J. L., *Professor of Religion.*
Scotch College, Western Australia, 1910; Biblical Seminary, New York, 1915; B. D. Hartford Theological Seminary 1922.

CURTIS, DONALD DEXTER, *Professor of Mechanics and Hydraulics.*
B. E. 1919; M. S. 1931 University of Iowa; Graduate Work University of Washington.

DANIEL, DAVID WISTAR, *Dean, School of General Science, Professor of English.*
A. B. Wofford College 1892; M. A. Vanderbilt University 1901; Graduate Work University of Chicago Summer 1899; Litt. D. Wofford College 1914.

DAVIS, JOE WALLACE, *Assistant Coach.*
B. S. Southwestern 1929.

DUMAS, ALBERT HUGH, *Assistant Professor of Military Science and Tactics, Assistant Commandant.*
Captain, Infantry, U. S. A. B. S. Alabama Polytechnic Institute 1917. Graduate The Infantry School 1926.

DUNAVAN, DAVID, *Assistant Professor of Entomology and Zoology.*
B. S. Oregon Agricultural College 1925; M. S. Iowa State College 1928; Graduate Work Cornell University Summers 1929, 1931.

EARLE, SAMUEL BROADUS, *Dean, School of Engineering, Professor of Mechanical Engineering, Director of Engineering Experiment Station.*
A. B. 1898, A. M. 1899, Furman University; M. E. Cornell University 1902; LL. D. Furman University 1932; General Electric Company.

EATON, ROBERT KNIGHT, *Professor of Carding and Spinning.*
A. B. Bowdoin College 1905; Graduate Work Philadelphia Textile School.

EDWARDS, GEORGE HERBERT, JR., *Assistant Professor of Mathematics.*
B. A. 1913, M. A. University of South Carolina; Graduate Work University of Chicago and Columbia University.

FEELEY, ROBERT OLIVER, *Professor of Veterinary Science.*
D. V. S. New York University 1906.

FERNOW, BERNHARD EDWARD, *Professor of Mechanical Engineering.*
A. B. 1904, M. E. 1906, Cornell University.

FREEMAN, EDWIN JONES, *Associate Professor of Machine Shop.*
B. S. Clemson Agricultural College 1922.

GAMMON, JAMES POLK, *Assistant Professor of Military Science and Tactics, Assistant Commandant.*
Captain, Infantry, U. S. A.; A. B. Fredericksburg College, 1913; Graduate, Company Officers Course, The Infantry School, 1926.

GLENN, HOWARD EMMITT, *Associate Professor of Civil Engineering.*
B. S. in C. E. 1922, C. E. 1927, University of Kentucky.

GODFREY, WILLIAM EMERA, *Professor of Physics.*
A. B. 1893, A. M. 1898, Mercer University; Graduate Work University of Chicago and Cornell University.

GOODALE, BEN EDMUND, *Associate Professor of Dairying.*
B. S. Iowa State College 1922; M. S. Iowa State College 1929.

GOODE, JOHN K., *Assistant Professor of Religion.*
A. B. Richmond College 1898; Graduate of Crozer Theological Seminary 1901.

GUIN, MARVIN, *Assistant Professor of Agricultural Economics.*
B. S. Alabama Polytechnic Institute 1926; Graduate Work Iowa State College.

HARRIS, DAVID NIVIN, *Assistant Professor of Drawing.*
B. S. Clemson Agricultural College 1908.

HENDRICKS, JESSE CODY, *Associate Professor of Physics.*
B. S. Franklin College 1925; M. A. 1928; Ph. D. Indiana University 1930.

HINWOOD, JOSEPH H., *Assistant Professor of Military Science and Tactics, Assistant Commandant and Executive.*
Captain Infantry, U.S.A., LL. B. Georgetown University, 1914; Graduate of Infantry School, Company Officers Course 1925; Graduate of Infantry School, Advanced Course 1933.

HODGE, WYLIE FORT DUPRE, *Assistant Professor of Architecture.*
Clemson Agricultural College; New York School of Fine and Applied Arts, 1915-16; 1920-21; Further Work RR. Gallerie di Firenze, Italy, Summer 1931.

HOLMES, ALESTER GARDEN, *Professor of History.*
B. S. The Citadel 1897; Graduate Work University of Chicago Summer 1911.

HOWARD, FRANK JAMES, *Assistant Coach.*
B. S. University of Alabama 1931.

HUFF, LORENZ DITMAN, *Assistant Professor of Physics.*
A. B. 1927, M. S. 1928, Oklahoma University; Ph. D. California Institute of Technology 1931.

HUNTER, HOWARD L., *Associate Professor of Chemistry.*
B. Chem. 1925; Ph. D. 1928 Cornell University.

HUNTER, JOSEPH EVERETT, *Associate Professor of Mathematics.*
B. S. Clemson Agricultural College 1896; Graduate Work University of Chicago Summers 1902, 1904, 1910; University of North Carolina Summer 1928.

JOHNSON, WILLIS EDWIN, *Assistant Professor of Agricultural Education.*
B. S. Mississippi A. and M. College 1922; Graduate Work Cornell University Summer 1931.
(In charge of Agricultural Education work at Seneca, S. C.)

JONES, ROBERT MORGAN, *Assistant Coach.*
B. S. Clemson Agricultural College 1930.

KINARD, FRANCIS MARION, *Assistant Professor of English.*
A. B. Wofford College 1923; A. M. University of North Carolina 1929.

KLUGH, WILLISTON WIGHTMAN, *Associate Professor of Drawing.*
B. S. Clemson Agricultural College 1896; Graduate Work Vanderbilt University 1898; Cornell University 1900.

*KLUTTS, BYRON ADELBERT, *Assistant Professor of Agricultural Education.*
B. S. Mississippi A. and M. College 1922; Graduate Work Cornell University Summers 1929, 1930.
(In charge Agricultural Education work Central, S. C.)

LAMASTER, JOSEPH PAUL, *Professor of Dairying.*
B. S. University of Kentucky 1913; M. S. in Agriculture, University of Kentucky 1928.

LANE, JOHN DEWEY, *Assistant Professor of English.*
A. B. Newberry College 1920; M. A. University of Virginia 1924; Graduate Work Columbia University 1923 and 1928-29.

LEE, RUDOLPH EDWARD, *Professor of Architecture.*
B. S. 1896, M. Arch. 1928, Clemson Agricultural College; Graduate Work Cornell University; University of Pennsylvania; Zanerian Art School.

LEE, ROLAND LINWOOD, JR., *Assistant Professor of Carding and Spinning.*
B. S. Clemson Agricultural College 1925; Georgia School of Technology Summer 1925; M. S. North Carolina State College 1930; Texas A. & M. College Summer 1931; Lowell Textile Institute 1932, 1933.

LIPPINCOTT, WILLIAM LEROY, *Professor of Chemistry.*
B. Chem. 1918, Graduate Work 1920-21, Cornell University.

LITTLE, SIDNEY WAHL, *Assistant Professor of Architecture.*
B. Arch. Cornell University 1929; University of Pennsylvania Summer 1925; Certificate Ecole Americaine des Beaux Arts Fontainbleau; Further work RR. Gallerie di Firenze, Italy, Summer 1931.

MCKENNA, ARTHUR ERNEST, *Associate Professor of Weaving and Design.*
Graduate Rhode Island School of Design 1922; Bradford-Durfee Textile School; B. S. Clemson Agricultural College 1930; M. S. University of Tennessee 1933.

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*On leave

MANNING, EUGENE REYNOLDS, *Professor of Textile Chemistry and Dyeing.*
S. B. in Civil Engineering 1912, S. B. in Chemical Engineering 1915, University of Delaware; Philadelphia Textile School 1913, S. B. in Chemical Engineering Massachusetts Institute of Technology 1918; Ph. D. University of Pennsylvania 1927.

MARTIN, SAMUEL MANER, *Professor of Mathematics.*
B. S. The Citadel 1896; Graduate Work Cornell University Summer 1900; Harvard University Summer 1904; University of Chicago Summer 1908.

MARSHALL, JOHN LOGAN, *Associate Professor of Wood Work.*
Georgia School of Technology; B. S. Clemson Agricultural College 1909; Bradley Polytechnic Institute 1919.

MILLS, WILLIAM HAYNE, *Professor of Rural Sociology.*
A. B. Davidson College 1892; B. D. Columbia Theological Seminary 1897.

MITCHELL, JACK HARRIS, *Professor of Chemistry.*
B. S. 1903, M. S. 1904, Alabama Polytechnic Institute; M. S. University of Illinois 1911.

MONROE, JAMES BEASLEY, *Acting Associate Professor of Vocational Education.*
B. S. Clemson Agricultural College 1915; Graduate work George Peabody College Summer 1917; University of Chicago Summer 1918; Texas A. & M. College Summers of 1930, 1931, 1932.

MOORMAN, THOMAS SAMUEL, *Professor of Military Science and Tactics.*
Colonel, Infantry, U. S. A.; B. S. Clemson Agricultural College, 1896.

MORGAN, CHARLES LEE, *Professor of Poultry Husbandry.*
B. S. University of Kentucky 1918; Graduate Work Iowa State College 1924; M. S. University of Kentucky 1927; Graduate Work University of Wisconsin 1931-1932.

MUSSER, ALBERT MYERS, *Professor of Horticulture.*
B. S. University of Florida 1918; Graduate Work Michigan State College 1930, 1933.

NEELY, JESS C., *Head Coach of Intercollegiate Athletics.*
LL. B. Vanderbilt University 1924.

NEWMAN, CHARLES CARTER, *Professor of Horticulture.*
Alabama Polytechnic Institute; B. S. Clemson Agricultural College.

NUTT, GEORGE B., *Associate Professor of Agricultural Engineering.*
B. S. Mississippi State College 1930.

PETERSON, VERD, *Consulting Professor of Agricultural Education, State Supervisor of Agricultural Education, Columbia, S. C.*

PHILPOT, CLAUDE PAUL, *Assistant Professor of Forge and Foundry.*
B. S. Clemson Agricultural College 1928;Training course, Bethlehem Steel Company 1928.

POLLARD, FRANK H., *Professor of Chemistry.*
B. of Chemistry 1916, Ph. D. 1922, Cornell University.

RAMSEY, GEORGE L., *Assistant Professor of Military Science and Tactics.*
Captain Infantry U. S. A.; B. S. Centre College 1914; Graduate of the Infantry School, Basic Officers Course 1923; Graduate of the Infantry School, Advanced Course 1933.

RANKIN, HENRY, JR., *Assistant Professor of English.*
A. B. 1922, A. M. 1927, University of North Carolina 1928-29; University of Wisconsin Summer 1930; Graduate Work University of North Carolina 1931-1932.

REED, ALBERT RAYMOND, *Assistant Professor of Physics.*
A. B. Wofford College 1925; M. S. University of South Carolina 1931.

RHODES, SAM ROSEBOROUGH, *Professor of Electrical Engineering.*
B. S. 1900, M. S. 1901, Furman University; B. S. 1907, E. E. 1928, Clemson Agricultural College; General Electric Company; Westinghouse Elec. and Mfg. Co.

RHYNE, ORESTES PEARL, *Professor of Modern Languages.*
A. B. Lenoir-Rhyne College 1907; A. B. 1908, A. M. 1909, University of North Carolina; Ph. D. Johns Hopkins University 1913.

RICE, MYRON ARTHUR, *Assistant Professor of Botany.*
B. S. University of California 1916; M. S. in Agriculture, Cornell University 1925.

ROSENKRANS, DUANE B., *Associate Professor of Botany.*
A. B. Upper Iowa University 1911; M. A. University of Wisconsin 1917.

*SAMS, JAMES HAGOOD, JR., *Assistant Professor of Mechanical Engineering.*
B. S. Clemson Agricultural College 1924; E. E. Cornell University 1926; M. S. in Mechanical Engineering University of Michigan 1931.

SATTERLEE, CAPERS, *Assistant Professor of Religion.*
B. A. University of The South 1921; B. D. University of The South 1923.

SHANKLIN, AUGUSTUS G., *Professor of Mathematics.*
B. S. The Citadel 1893; Graduate Work Cornell University Summer 1908; Columbia University Summer 1911.

SHELDON, DAWSON C., *Associate Professor of Mathematics.*
B. S. State College of Washington 1925; M. A. 1927, Ph. D. 1929 University of California.

SHENK, DONALD H., *Associate Professor of Mechanical Engineering.*
B. S., M. E. Purdue University 1924; Graduate Work Purdue University 1927-1929; S. P. E. E. Summer School 1929.

SHERMAN, FRANKLIN, *Professor of Entomology and Zoology.*
B. S. Agriculture, Cornell University 1900; M. S. Maryland Agricultural College 1912.

SHERRILL, GEORGE RAYMOND, *Professor of Economics and Government.*
A. B. Wake Forest 1921; A. M. Columbia University 1925; Ph. D. Columbia University 1930.

SHINN, WILLIAM EDWARD, *Associate Professor of Weaving and Designing.*
B. S. North Carolina State College 1924, M. S. 1928.

SMITH, JOHN OWEN, *Assistant Professor of Religion.*
A. B. Wofford College 1922; B. D. Yale 1925.

STARKEY, LAWRENCE VINCENT, *Professor of Animal Husbandry.*
B. S. University of Illinois 1914; M. S. University of Wisconsin 1917; Graduate work University of Wisconsin 1930.

STEVENSON, JAMES ANNE, *Assistant Professor of Civil Engineering.*
B. C. E. University of Arkansas 1925; M. S. Iowa State College 1927.

STRIBLING, BRUCE HODGSON, *Associate Professor of Vocational Education.*
B. S. Clemson Agricultural College 1918; Graduate work George Peabody College Summers 1927, 1929.

*On leave 1934-1935.

TATE, HAROLD SIMMONS, *Associate Professor of Vocational Education.*
B. S. Clemson Agricultural College 1925; M. A. Columbia University 1929; George Peabody College Summers 1927, 1931, 1932.

TAYLOR, RUPERT, *Associate Professor of English.*
A. B. 1903, A. M. 1906, University of Arkansas; Ph. D. Columbia University 1911.

TINGLEY, FREEMAN THAYER, *Professor of Electrical Engineering.*
B. S. Bucknell 1922; M. S. University of Illinois 1929; Course Westinghouse Company.

TOPPING, CHARLES HAROLD, *Assistant Professor of Mechanical Engineering.*
B. S. Purdue University 1930.

WASHINGTON, WILLIAM HAROLD, *Dean, School of Vocational Education.*
B. S. Clemson Agricultural College 1920; M. S. Iowa State College 1922; Graduate Work Georgia School of Technology Summer 1925; George Peabody College Summers of 1928, 1929; 1932-1933.

WILLIAMS, BARNETT OSBORNE, *Assistant Professor of Rural Sociology.*
B. S. Clemson Agricultural College 1918; M. S. University of Virginia 1929; University of Minnesota 1930-1933.

WILLIS, HORACE HAROLD, *Dean, School of Textiles.*
B. S. Clemson Agricultural College 1917.

WILSON, CLEMSON M., *Consulting Professor of Industrial Education.*
A. B. Newberry 1913; M. A. University of South Carolina 1916.

ZURBURG, FREDERICK WILLIAM, *Assistant Professor of Chemistry.*
B. S. 1927, M. S. 1928 University of North Carolina.

INSTRUCTORS

BROCK, JOHN LELAND, *Vocational Education.*
B. S. Clemson Agricultural College 1927; Graduate Work George Peabody College.

CARTEE, EUGENE FRANKLIN, *Weaving and Designing.*
B. S. Clemson Agricultural College 1925; Graduate Work University of Tennessee Summers 1929, 1931.

CARTER, GUY MARSHALL, *Graduate Assistant, Drawing.*
B. S. Clemson Agricultural College 1934.

COOKE, ARTHUR LOUIS, *English.*
B. A. University of Virginia 1930; M. A. University of Virginia 1931; University of Michigan 1931-1932.

DUNLAP, GEORGE HEYWARD, *Carding and Spinning.*
B. S. Clemson Agricultural College 1928.

*GAGE, GASTON, *Carding and Spinning.*
B. S. Clemson Agricultural College 1921.

HUCKABEE, MARVIN, L., *Textile Chemistry and Dyeing.*
B. S. Clemson Agricultural College 1933.

LATIMER, PHILIP HAXALL, JR., *Graduate Assistant, Chemistry.*
B. S. Clemson Agricultural College 1934.

LIPSCOMB, RALPH WALDO, *Agronomy.*
B. S. Clemson Agricultural College 1928; M. S. Michigan State College 1930.

NARAMOR, GILBERT EDWARD, *Military Science and Tactics, Sergeant Major in Commandant's Office.*
Staff Sergeant, DEML, Infantry, U. S. Army.

OSMOND, JOHN BAINES, *Graduate Assistant, Textile Chemistry.*
B. S. West Virginia University 1926.

RITCHIE, ROBERT RUSSELL, *Animal Husbandry.*
B. S. Iowa State College 1926.

SHARPE, JOHN RAYMOND, *Graduate Assistant, Chemistry.*
B. S. Clemson Agricultural College 1934.

WARE, ROBERT EDWARD, *Zoology and Entomology.*
B. S. Iowa Wesleyan College 1929; Graduate Work Iowa State College Summer 1931 and 1932.

*On leave first semester 1934-1935.

STANDING COMMITTEES OF THE FACULTY 1934-1935

The President is ex officio a member of all committees.

ADMISSIONS:
Daniel, *Chairman;* Calhoun, Cooper, Holmes, Martin, Metz.

ADVANCED COURSES:
Brown, Cooper, Hunter, H. L., Manning, Sams, Registrar, *ex officio.*

ASSEMBLIES AND LECTURES:
Daniel, *Chairman;* Bradley, Crouch, Earle, Freeman, Lippincott.

ATHLETICS:
Milford, *Chairman;* Barre, Mitchell, Rhodes, Watkins, J. C. Littlejohn, Business Manager, *ex officio;* G. E. Metz, Acting Registrar, *ex officio.*

AWARDS AND HONORS:
Daniel, *Chairman;* Armstrong, Carodemos, Curtis, Lee, R. L.

CATALOG:
President Sikes, *Chairman;* Brearley, Littlejohn, Metz, Washington, Rankin.

DAY AND SPECIAL STUDENTS:
Metz, *Chairman;* Holtzendorff, Littlejohn, The Commandant.

DEFICIENT STUDENTS:
Kinard, *Chairman;* Burton, Hunter, J. E., Brown, Goodale, Pollard.

FACULTY PROGRAM:
Sherrill, *Chairman;* Andrews, Curtis, Dunlap, Godfrey, Stevenson.

LIBRARY:
The Librarian, *Chairman;* Calhoun, Lee, R. E., Holmes, Lane, Mills, Rhyne.

REEXAMINATION AND PROMOTION:
Metz, *Chairman;* Calhoun, Daniel, Earle, Kinard, Mitchell, Martin, Tate.

SCHEDULE:
Metz, *Chairman;* Aull, Eaton, Naramor, Kinard, Pollard, Rhodes, Tate.

SECONDARY SCHOOLS RELATIONS:
Metz, *Chairman;* Ayers, Booker, Kinard, Lee, R. L., Marshall, Sherman, Washington.

STUDENT LOANS:
Littlejohn, *Chairman;* Evans, Woodward.

STUDENT ORGANIZATIONS:
Eaton, *Chairman;* Calhoun, Freeman, Marshall, Taylor.

STUDENT PUBLICATIONS:
Lane, *Chairman;* Edwards, Littlejohn.

UNIFORM:
Littlejohn, *Chairman;* G. W .Speer (Trustee-Member), Eaton, Evans, The Commandant.

VISITORS:
Woodward, *Chairman;* Littlejohn, Metz, The Commandant.

OTHER OFFICERS

VIRGINIA EARLE SHANKLIN ---------- *Secretary to the President*
JEAN BEVERLEY SLOAN ---------- *Assistant to the Registrar*
JOSEPHINE EVELYN DANIEL, A. B. ---------- *Stenographer Registrar's Office*
MARY GAY CULP ---------- *Stenographer Fertilizer Office*
MARY CONRAD STEVENSON, A. B. ---------- *Assistant Librarian*
ERNESTINE CLOUD, *A. B.* ---------- *Assistant to the Librarian*
ANTOINETTE HARRISON EARLE, A. B. ---------- *Assistant to the Librarian*
EDWARD BERNARD ELMORE ---------- *Bookkeeper*
BOYCE B. BURLEY ---------- *Assistant Bookkeeper*
ANDREW JOSEPH BROWN ---------- *Assistant Bookkeeper*
HELEN MORRISON ---------- *Assistant to Treasurer*
HARLEY WEST, Master Sergeant, U. S. A., Retired ---------- *Quartermaster*
HARRY J. WILKINSON, Sergeant, U. S. A. ---- *Clerk, Commandant's Office*
KLINE, AUBREY J., Sergeant, U. S. A. ---------- *Clerk, Commandant's Office*
IRENE JULIAN, R. N. ---------- *Head Nurse*
MYRTLE DEAN ---------- *X-Ray and Laboratory Technician*
JOSEPHINE MCWHORTER, R. N. ---------- *Assistant Nurse*
ELIZABETH VIRGINIA SHANKLIN, A. B. ----- *Secretary and Assistant Nurse*
DAVID J. WATSON, B. S. ---------- *Supt. of Campus, Roads and Buildings*
JAMES DOUGLAS HARCOMBE ---------- *Mess Officer*
RUDOLPHE E. LEE, A. I. A. ---------- *College Architect*
PRESTON BROOKS HOLTZENDORFF, JR., LL. B., *General Secretary, Y. M. C. A.*
JOHN ROY COOPER, B. S. ---------- *Associate Secretary Y. M. C. A.*
JOHN K. GOODE, A. B. ---------- *Pastor Baptist Church*
CAPERS SATTERLEE, B. D. ---------- *Rector Episcopal Church*
SYDNEY J. L. CROUCH, B. D. ---------- *Pastor Presbyterian Church*
HERBERT OTTO CHAMBERS ---------- *Pastor Methodist Church*

FERTILIZER INSPECTION AND ANALYSIS

Fertilizer Board of Control

F. E. Cope, *Chairman* — Paul Sanders
S. H. Sherard — G. W. Speer

J. H. Woodward, *Secretary, Fertilizer Board of Control*

H. W. Barre, B. S., M. A., *Dean, School of Agriculture, Director*
B. F. Robertson, B. S., *Chief Chemist, Head of Fertilizer Analysis*
J. T. Foy, B. S., *Assistant Chemist* (Fertilizer Analysis)
Benj. Freeman, B. S., *Assistant Chemist*
(Fertilizer and Miscellaneous Analysis)

LIVESTOCK SANITARY WORK STAFF

COLUMBIA, S. C.

W. K. Lewis, V. S., M. D. V., *State Veterinarian and Director*

Assistant State Veterinarians

Dr. R. A. Mays
Dr. Jack Scott
Dr. E. T. Fisher
Dr. F. K. Peterson
Dr. W. R. Chastain
Dr. E. R. Van De Grift
Dr. J. G. McKee
Dr. H. B. Hood
Dr. S. M. Witherspoon

Deputy State Veterinarians

N. J. Ayers ---------- Greer
W. A. Barnette ------ Greenwood
M. R. Blackstock ---- Spartanburg
F. P. Caughman -------- Columbia
J. T. Dickson ---------- Rock Hill
H. P. Dyches ---------- Aiken
H. L. Frieze ---------- Gaffney
H. W. Graves ---------- Union
C. C. Harmon ---------- Lexington
C. Helms ---------- Darlington
L. J. Hogan ---------- Charleston
O'Neal Jacobs ---------- Laurens
T. B. Jacobs ---------- Newberry
T. J. Kinard ---------- Ninety Six
F. E. Kitchen ---------- Greenville
G. R. Kitchen ---------- Sumter
Don. O. Kitchen -------- Greenville
G. J. Lawhon ---------- Hartsville
J. S. Lide ---------- Newberry
B. C. McLean ---------- Aiken
W. K. Magill ---------- Chester
J. H. Morse ---------- Sumter
Benj. McInnes ---------- Charleston
B. K. McInnes ---------- Charleston
R. R. Salley ---------- Orangeburg
B. C. Talley -------- Bennettsville
J. H. Moore ---------- Charleston
R. L. Willis ---------- Walhalla

AGRICULTURAL EXPERIMENT STATION STAFF

BOARD OF CONTROL

Hon. J. E. Wannamaker, St. Matthews, S. C., *Ex Officio.*
Hon. A. F. Lever, Columbia, S. C.
Hon. Paul Sanders, Ritter, S. C.
Hon. Christie Benet, Columbia, S. C.
Hon. Sam H. Sherard, Ninety Six, S. C.
Hon. T. B. Young, Florence, S. C.
Hon. F. E. Cope, Cope, S. C.

E. W. Sikes, *President;* H. W. Barre, *Director;*
G. H. Aull, *Asst. Director**
R. A. McGinty, *Asst. Director*

AGRICULTURAL ECONOMICS,

G. H. Aull, Agricultural Economist.
B. A. Russell, Assistant Agricultural Economist.
Marvin Guin, Assistant Agricultural Economist.
H. A. White, Assistant Agricultural Economist.
B. O. Williams, Associate Agricultural Economist and Rural Sociologist.

AGRONOMY,

H. P. Cooper, Agronomist.
W. R. Paden, Associate Agronomist.
T. C. Peele, Associate Soil Scientist.
W. B. Rogers, Assistant Agronomist.
B. E. G. Pritchard, Assistant in Agronomy.

ANIMAL HUSBANDRY,

L. V. Starkey, Animal Husbandman.
E. G. Godbey, Associate Animal Husbandman.

BOTANY AND BACTERIOLOGY,

G. M. Armstrong, Botanist and Plant Pathologist.
W. B. Aull, Associate Bacteriologist.
C. H. Arndt, Associate Botanist and Plant Pathologist.
C. B. Sumner, Assistant in Plant Pathology.
C. C. Bennett, Laboratory Assistant.

CHEMISTRY,

J. H. Mitchell, Chemist.
D. B. Roderick, Assistant Chemist.
W. B. Keller, Assistant in Chemistry.

CROP PEST COMMISSION,

G. M. Armstrong, State Pathologist.
Franklin Sherman, State Entomologist.
J. A. Berly, Assistant State Entomologist.

*On leave 1934-1935.

DAIRY,
J. P. LaMaster, Dairyman.
E. C. Elting, Associate Dairyman.
W. H. Padgett, Superintendent of A. R. Testing.

ENTOMOLOGY,
Franklin Sherman, Entomologist.
O. L. Cartwright, Associate Entomologist.
J. G. Watts, Assistant Entomologist.
J. N. Todd, Assistant in Entomology.

HOME ECONOMICS, Rock Hill, S. C.,
Mary E. Frayser, Home Economist.
Ada M. Moser, Research Specialist in Home Economics.

HORTICULTURE,
A. M. Musser, Horticulturist.

FARM,
C. S. Patrick, Head Farms Division.

POULTRY,
C. L. Morgan, Poultryman.
D. F. Sowell, Assistant in Poultry Husbandry.

PUBLICATIONS,
A. B. Bryan, Agricultural Editor.

VETERINARY,
R. O. Feely, Veterinarian.

COAST STATION, Summerville, S. C.,
E. D. Kyzer, Superintendent.
T. M. Clyburn, Agent, (U. S. Bureau Animal Industry).

PEE DEE STATION, Florence, S. C.,
E. E. Hall, Superintendent.
W. B. Albert, Associate Plant Physiologist.
W. M. Lunn, Associate Agronomist. (U. S. Bureau of Plant Industry).
F. F. Bondy, Assistant Entomologist, (U. S. Bureau Entomology).

SANDHILL STATION, R. 5, Columbia, S. C.,
J. A. Riley, Superintendent.
L. E. Scott, Assistant Horticulturist.
R. W. Wallace, Assistant Agronomist.
J. E. Adams, Associate Soil Technologist, (U. S. Bureau Chemistry and Soils).
E. W. Faires, Agent, (U. S. Bureau Dairying).
E. C. Roller, Assistant Chemist, (U. S. Bureau Chemistry and Soils).

AGRICULTURAL EXTENSION STAFF

E. W. SIKES, M. A., Ph. D., *President*
W. W. LONG, B. S., LL. D., *Director**
D. W. WATKINS, B. S., M. A., *Director*
C. M. HALL, *Chief Clerk and Accountant*

AGRICULTURAL EDITOR, A. B. Bryan, Clemson College.

AGRONOMY DIVISION,
Specialist in Charge Extension Work, R. W. Hamilton, Clemson College.
Forage Crop Specialist,
Tobacco Specialist, H. A. McGee, Florence.

AGRICULTURAL ECONOMICS,
Farm Management Specialist, O. M. Clark, Clemson College.

ANIMAL HUSBANDRY DIVISION, L. V. Starkey, *Chief,* Clemson College.
Livestock Specialist, A. L. DuRant, Florence.
Livestock Specialist, J. R. Hawkins, Box 1463, Columbia.

DAIRY DIVISION,
Specialist in Charge Extension Work, C. G. Cushman, Clemson College.

ENTOMOLOGY DIVISION,
Bee Specialist, E. S. Prevost, Clemson College.
Extension Entomologist, W. C. Nettles, Clemson College.

HORTICULTURAL DIVISION,
Extension Horticulturist in Charge, E. H. Rawl, Clemson College.
Extension Horticulturist, A. E. Schilletter, Clemson College.

MARKETING DIVISION, Geo. E. Prince, *Chief,* Box 1463, Columbia.
Agent in Marketing, T. A. Cole, Box 1463, Columbia.
Specialist Grading and Packing, E. H. Talbert, Box 1463, Columbia.

POULTRY DIVISION,
Poultry Husbandman, P. H. Gooding, Clemson College.

BOYS' 4-H CLUB WORK,
Assistant State Boys' Club Agent, I. D. Lewis, Clemson College.
Assistant State Boys' Club Agent, T. L. Vaughan, Clemson College.†
Acting Assistant State Boys' Club Agent, L. O. Clayton, Clemson College.

STATE FORESTER, H. A. Smith, State Office Building, Columbia.

*Deceased November 13, 1934.
†On leave.

AGRICULTURAL EXTENSION STAFF (Continued)

DISTRICT AGENTS

First District	A. A. McKeown, Box 266	Spartanburg
Second District	A. H. Ward	Aiken
Third District	J. T. Lazar	Florence

COUNTY AGRICULTURAL AGENTS

County	*Name*	*Post Office*
Abbeville	Z. D. Robertson	Abbeville
Aiken	T. W. Morgan	Aiken
Allendale	W. H. Pressly	Allendale
Anderson	E. P. Josey	Anderson
Bamberg	W. H. Craven	Bamberg
Barnwell	H. G. Boylston	Barnwell
Beaufort	T. H. Seabrook	Beaufort
Berkeley	J. H. Harvey	Moncks Corner
Calhoun	L. B. Massey	St. Matthews
Charleston	C. W. Carraway	Charleston
Cherokee	S. C. Stribling	Gaffney
Chester	M. C. Crain	Chester
Chesterfield	W. J. Tiller	Chesterfield
Clarendon	F. M. Rast	Manning
Colleton	L. W. Alford	Walterboro
Darlington	J. M. Napier	Darlington
Dillon	S. W. Epps	Dillon
Dorchester	R. A. Jackson	St. George
Edgefield	H. A. Woodle	Edgefield
Fairfield	R. H. Lemmon	Winnsboro
Florence	J. W. McLendon	Florence
Georgetown	M. M. McCord	Georgetown
Greenville	W. R. Gray	Greenville
Greenwood	E. C. Turner, Jr.	Greenwood
Hampton	J. C. Anthony	Hampton
Horry	V. M. Johnston	Conway
Jasper	J. P. Graham	Ridgeland
Kershaw	Henry D. Green	Camden
Lancaster	R. D. Steer	Lancaster
Laurens	C. B. Cannon	Laurens
Lee	T. M. Cathcart	Bishopville
Lexington	R. R. Mellette	Lexington
Marion	W. R. Wells, Jr.	Marion
Marlboro	W. D. Wood	Bennettsville
McCormick	E. L. Rogers	McCormick
Newberry	P. B. Ezell	Newberry
Oconee	G. H. Griffin	Walhalla

Orangeburg	R. F. Kolb	Orangeburg
Pickens	T. A. Bowen	Pickens
Richland	D. R. Hopkins	Columbia
Saluda	Claude Rothell	Saluda
Spartanburg	W. H. Stallworth	Spartanburg
Sumter	J. M. Eleazer	Sumter
Union		Union
Williamsburg		Kingstree
York	L. W. Johnson	Rock Hill

ASSISTANT COUNTY AGRICULTURAL AGENTS

T. F. Cooley, Newberry
T. O. Bowen, Sumter

LOCAL AGENTS (Colored Men)

M. F. Whittaker, President, State College. District Agent, Orangeburg
H. E. Daniels, Assistant District Agent, State College, Orangeburg

County	*Name*	*Post Office*
Anderson	J. A. Gresham	Anderson
Bamberg	J. D. Marshall, Bx. 460	Bamberg
Beaufort	Benjamin Barnwell	Frogmore
Clarendon	Wm. Thompson, Bx. 304	Manning
Darlington	S. C. Disher	Darlington
Florence	L. V. Walker	Florence
Greenville	Booker T. Miller	Greenville
Orangeburg	G. W. Daniels 135 Treadwell St.	Orangeburg
Richland	J. E. Dickson, Bx. 992	Columbia
Spartanburg	W. C. Bunch, Box 186	Spartanburg
Sumter	Jason Maloney	Sumter
Union	E. N. Williams	Union

STATE, DISTRICT AND COUNTY HOME AGENTS AND SPECIALISTS

SOUTH CAROLINA

Lonny I. Landrum, State Home Dem. Agent, Winthrop College ---------- Rock Hill, S. C.
Harriette B. Layton, Asst. State Home Dem. Agt. Winthrop College ---------- Rock Hill, S. C.
Bessie Harper, District Agent ---------- Aiken, S. C.
Mrs. T. D. Plowden, District Agent, ---------- Dalzell, S. C.
Miss Bessie Boggess, Extension Nutritionist, Winthrop College ---------- Rock Hill, S. C.
Mrs. Harriett F. Johnson, State Girls' Club Agent, Winthrop College ---------- Rock Hill, S. C.
Mrs. Dora Dee Walker, Prod. and Consv. Specialist, Winthrop College ---------- Rock Hill, S. C.
Juanita Neely, Extension Poultry Specialist, Winthrop College, ---------- Rock Hill, S. C.
Mary Shaw Gilliam, Clothing Specialist, Winthrop College, ---------- Rock Hill, S. C.
Miss Janie Ketchen, Marketing Specialist, ---------- Rock Hill, S. C.

COUNTY HOME AGENTS

County	*Name*	*Address*
Abbeville	Elizabeth Herbert	Abbeville
Aiken	Elizabeth Bailey	Aiken
Allendale	Lucia Porter	Allendale
Anderson (Ch. of Com.)	Ruth Payne	Anderson
Bamberg	Margaret Martin	Bamberg
Barnwell	Elizabeth McNab	Barnwell
Beaufort	Mattie Lee Cooley	Beaufort
Berkeley	Leona Hewitt	Moncks Corner
Calhoun	Lula Chriesman	St. Matthews
Charleston (Ch. of Com)	Caroline S. Alston	Charleston
Cherokee	Elizabeth Williams	Gaffney
Chester	Ethel Ayers	Chester
Chesterfield	Kerby Tyler	Chesterfield
Clarendon	Carrie Carson	Manning
Colleton	Pearl Calvert	Walterboro
Darlington	Mrs. Emmie J. Evans	Darlington
Dillon	Etta Sue Sellers	Latta
Dorchester	Ophelia Barker	St. George
Edgefield	Margaret McGirt	Edgefield
Fairfield	Lucile Clarke	Winnsboro
Florence (Box 379)	Portia Seabrook	Florence
Georgetown	Mrs. Minnie E. Doar	Georgetown
Greenville (Box 642)	Julia W. Stebbins	Greenville
Greenwood (Ch.of Com.)	Mary Ellen Eaves	Greenwood
Hampton	Izora Miley	Hampton
Horry	Margaret Cloud	Conway
Jasper	Marie Lambert	Ridgeland
Kershaw	Sadie Craig	Camden
Lancaster	Ann Moss Moore	Lancaster
Laurens	Jennie E. Coleman	Laurens

Lee	Sallie A. Pearce	Bishopville
Lexington	Winnie Belle Holden	Lexington
McCormick	Mrs. Nell Stallworth	McCormick
Marion	Mrs. Edna McPherson	Mullins
Marlboro	Janie McDill	Bennettsville
Newberry	Ethel Counts	Newberry
Oconee	Mary C. Haynie	Walhalla
Orangeburg	Louise Fleming	Orangeburg
Pickens	Sarah G. Cureton	Pickens
Richland (C. of C.)	Eleanor Carson	Columbia
Saluda	Helen D. Abernathy	Saluda
Spartanburg (C. of C.)	Kate M. Hooper	Spartanburg
Sumter (Bd. of Trade)	Annie T. Ervin	Sumter
Union	Mahala J. Smith	Union
Williamsburg	Mrs. Elizabeth D. Boykin	Kingstree
York (C. of C.)	Margaret Fewell	Rock Hill
Florence	Mildred David (Asst. Home Agt.)	Lake City

COLORED HOME AGENTS

F. M. Whitaker, Acting Pres., State College, Orangeburg District Agent
Marian B. Paul, Supervising Agent, State College, Orangeburg, S. C.

County	*Name*	*Post Office*
Beaufort	Willie Mabel Price	Frogmore
Charleston	Alberta V. DeVeaux	Charleston
Georgetown	Rosa G. Gadsden	Georgetown
Greenville	Delphenia Wilkerson	Greenville
Orangeburg	Marie A. Burch	Orangeburg
Richland	Frances Thomas	Columbia
Spartanburg	Virginia W. Whittington	Spartanburg
Sumter	Ophelia Williams	Sumter

PART II—INFORMATION

REQUIREMENTS FOR ADMISSION

General. All applicants for admission to Clemson College must be at least sixteen years of age and at the time of entrance must be free from contagious or infectious disease. A certificate of good moral character and honorable discharge from the last school attended is required.

Application Blanks. Blanks to be used in applying for admission may be obtained from the Registrar, Clemson College, South Carolina.

Admission by Certificate. Graduates from accredited high schools who have completed fifteen standard high-school units, including three units in English, two and one-half in mathematics, and two in history, are admitted to the freshman class without examination. A complete statement of the applicant's high-school record must be submitted by the high-school principal on the regular application blank. If he has attended another college, a transcript of that record and a statement of honorable discharge must be submitted.

Admission by Examination. Students who do not meet the above requirements may be admitted to the college by passing the entrance examinations. For the dates of these examinations see the college calendar.

Admission by Certificate and Examination. Applicants who are not graduates of accredited high schools, but who can give acceptable documentary evidence of having completed the equivalent of fifteen units of work under formal instruction, will be required to pass examinations on English, mathematics, history, and one other subject selected by the Registrar. These examinations are held at the same time as the regular entrance examinations.

Admission to Advanced Standing. Work that has been taken in other colleges will be credited for an equivalent amount of

work so far as it applies to any course offered in the College. The applicant must present: (a) a letter of honorable dismissal from the institution last attended, and (b) an official transcript of his record, including entrance credits. College credits given by transfer are provisional and may be cancelled at any time if the student's work is unsatisfactory. A student coming from another institution must spend at least one regular session in the College before he is eligible to apply for a degree.

Matriculation. Students upon arrival at the College at the opening of the session must report at once to the Registrar's Office. New students will be directed in the procedure necessary to complete their enrollment. A student's matriculation with the College is equivalent to his pledge to conform to the rules of the institution. Any admission gained or matriculation made irregularly is subject to cancellation.

EXPENSES

Settlement of College Fees. The Treasurer of the College is the financial officer and all transactions relating to payments must be conducted through him. The first quarterly payment must be made before a student can be assigned to a room in barracks or permitted to begin work. Remittances should be made in cash, money order, cashier's check, or by local check *made payable to S. W. Evans, Treasurer. All remittances made by mail must be addressed to: The Treasurer, Clemson College, Clemson College, S. C.* A personal check which is given in payment of dues and is returned by the bank unpaid automatically cancels a student's reservation and automatically drops from class rolls a student who is in school.

Expenses. Considering the standard of living and the quality of instruction, Clemson is one of the most economical colleges in the country. The total cost, exclusive of living cost and clothing is only $108.25. The total amount paid to the college by a new student for 1934-1935 was only $353.26, which included board, room, laundry, hospital, class and laboratory fees, matriculation and student activity fees, tuition and uniform. Old students paid less, as explained below. Out-of-state students pay $90 additional (see tuition).

Based upon conditions in 1934-1935, the living expenses, including board, laundry, heat, light, and water amounted to $175.40. The fees for matriculation, student medical service, laboratory work, dormitory upkeep, institutional incidentals, and student activities totaled $48.25.

The figures given in the above paragraph may be changed for 1935-1936; a more definite statement regarding expenses will be mailed to all applicants prior to the opening of the session.

The items listed above do not include the cost of books.

Tuition. Tuition for state students is $60, and for out-of-state students $150. The legal residence of parent or guardian determines the tuition status of the student.

Uniforms. All cadets are required to wear the regulation uniform of the College. The cost of the uniform garments needed by a student must be deposited with the Treasurer of the College at matriculation in September. The uniforms are made to individual measure and are purchased on the most favorable contract obtainable from a reputable manufacturer. The uniforms are the property of the student. The College merely acts as agent for the student and makes no charge or profit for handling. The total cost of complete new uniforms this session was $69.61. Students in upper classes use serviceable uniform articles on hand.

If a student takes proper care of his uniform and certain garments are serviceable for a second year, he will not be required to purchase a complete new outfit. The cost, therefore, to old students may be considerably reduced.

Any uniform allowances made to R. O. T. C. students by the Federal Government will be credited to the individual when the full amount of the commutation is received by the College.

Note: The above expenses are for regular cadets who live in the dormitories. Under certain regulations, and with the approval of the President, a student may become a Day Cadet or Day Student. A Day Cadet is a member of the corps who rooms and boards outside of barracks. A Day Student is a member of the student body who is not a member of the cadet corps.

Refunds to Students. Refunds will be made to students under the following rules:

1. A refund for uniforms will not be guaranteed to students who withdraw from the College after the uniforms have been ordered. If order cannot be cancelled, the uniforms will be sent to the cadet upon receipt of the same.

2. A refund for living expenses will be made at the rates charged, but no refund will be made for interruptions of less than two weeks or in cases of discharge issued less than two weeks from the end of the current quarter. The change of status of students taking meals in the mess hall can be made at the time of payment of fees only.

3. No fees will be refunded.

4. A refund of *all* moneys, except the matriculation fee of $3.00 and $1.00 per day for board, etc., will be made to a student who leaves college within ten days of the date of his matriculation; provided, however, that the refund for uniform cannot be guaranteed if the same has been ordered.

5. The College will not be liable for articles lost or stolen in the barracks.

6. The College will not be liable for lost or damaged laundry, unless reported within two days after the date upon which laundry was due to be delivered, and then not more than the actual depreciated value of such articles as have been lost or damaged.

Student Banking Accounts. For the convenience of students the College operates a banking department in the Treasurer's office where money can be deposited and withdrawn as the occasion may demand. This service is purely local. Students are urged to deposit their money in the bank and not to keep it in their rooms.

Books and Supplies. The L. C. Martin Drug Co., Inc., conducts a store near the campus and maintains a book and supply store where students may purchase textbooks, drawing instruments, and other student supplies. A complete list of the text-

books used in each course with the price of same will be furnished on application to the book store.

Each student will be required to own his textbooks and necessary equipment. All students shall submit their textbooks and other equipment for inspection at such times as are ordered.

Optional Expenses. It is not possible to give an estimate of a student's expenditures for such amusements as dancing, moving pictures, etc. This depends largely upon the disposition of the young man. The College endeavors to reduce to a minimum the temptation to spend money needlessly, but the authorities cannot be responsible for a student's private expenditures. This must be a matter between him and his parents.

Transcripts. Transcripts of scholastic records are not issued to students who have not been graduated. However, a transcript will be sent to any institution or other recognized rating agency upon request. One transcript is furnished free; additional copies are issued for one dollar each. Remittances for transcripts should be made payable to The Treasurer, Clemson College, but should accompany transcript requests and should be mailed to The Registrar.

Student Aids. There are few opportunities for students to earn money at Clemson by working in their spare time. In an agricultural and mechanical college most of the student's time when he is not in the classroom is occupied in laboratories, shops and fields. About forty young men secure positions as waiters in the mess hall, for which service they are paid at the rate of about eight dollars a month. These positions are filled by the Mess Officer, to whom all correspondence relating thereto should be addressed. In addition to this help, membership in the Reserve Officers Training Corps entitles freshmen and sophomores to a small commutation on uniforms. Juniors and seniors receive also a ration commutation.

LOAN FUNDS

John Bryce Baskin Fund. Interest on $2,000.00 given by Cecil L. Reid, of the Class of 1902, as an appreciation of the aid given him by Mr. Baskin. This fund is "available to any resident of South Carolina but if all things are equal, preference

to be given the boy or boys from York or Newberry Counties, South Carolina."

The Alexander P. Anderson and the Lydia Anderson Fellowship. Mr. and Mrs. Anderson have given to the Clemson Agricultural College the sum of $10,000 for the purpose of establishing a fellowship fund. The income from said trust fund is to be used for the purpose of awarding a scholarship or fellowship to one or more Clemson graduates for advanced work in biological sciences including bacteriology and entomology. The scholarship is to be awarded annually by the faculty of the Clemson Agricultural College to an outstanding student. The name of the beneficiary is reported to the Board of Trustees, and an accounting of the funds by the Treasurer of the College is made annually.

The William Wilson Finley Loan Fund. The sum of $1,000 has been deposited with the College to be used as a loan fund to students living in counties traversed by the Southern Railway or the Blue Ridge Railway.

The George Cherry Foundation. Mrs. Mary Cherry Doyle has donated $1,000 to aid worthy and needy students from Oconee County and that part of Anderson County including Pendleton. This fund is not available for first-year students.

The U. D. C. Loan Fund. The John C. Calhoun Chapter of the U. D. C. has created a fund of $500.00 to be loaned to lineal descendants of Confederate veterans. This fund is limited to juniors and seniors.

Clemson Student Loan Association Fund. In the spring of 1930 President Sikes invited a number of interested teachers, officers, alumni and friends of Clemson College to meet for the purpose of raising funds to be loaned to worthy Clemson students who were already in college. Many responded. Officers were elected; a constitution and by-laws adopted. Twelve hundred dollars has already been realized through gifts and annual membership dues, which are five dollars per year. There are 76 members. Anyone desiring to assist young men in this way should communicate with Mr. W. K. Livingston, Greenville, S. C., who is president of the organization, or J. C. Littlejohn, Business Manager, Clemson College, S. C.

The College is in need of funds to lend to worthy students. Donations for this or other purposes may be made to the Board of Trustees of Clemson College, or to the Trustees of the Clemson Alumni Foundation. The President of the College or the Secretary of the above-named boards will be glad to communicate with any person who is interested in establishing such a fund.

BUILDINGS AND GROUNDS

Buildings. The Administration Building houses the offices of the President, the Registrar, the Commandant, the Treasurer, the Business manager, the Professor of Military Science and Tactics, the Dean of the School of General Science and the Dean of the School of Vocational Education. This building also has over twenty classrooms. At the north end of the building is Memorial Hall, the College Auditorium, with a seating capacity of about eighteen hundred.

The Library Building houses the main library of the college and the experiment station library. There are in the library approximately twenty thousand volumes and ten thousand public documents and government publications. The departmental libraries also contain a number of volumes pertaining especially to the work of the department concerned.

The instructional work of the institution is maintained largely in the departmental buildings. The Schools of Engineering, Textiles, and Chemistry have individual buildings especially designed for their purposes. The School of General Science and the School of Vocational Education have their classrooms in the Administration Building. Certain laboratory work is conducted at the greenhouses, Live Stock Barns, Poultry Plant, Veterinary Hospital, and buildings on the college farm.

The cadet barracks comprise three large brick buildings, steam-heated, electrically-lighted, and abundantly supplied with hot and cold water. The four hundred and fifty rooms in the barracks are furnished with single-width iron cots and other necessary appointments.

The Hospital, located about a quarter of a mile from the barracks, is an especially designed wooden building. The equipment includes a Victor X-ray machine, a new Burdick ultra-violet

ray machine, and the latest design sorensen machine for ear, eye, nose, and throat treatments.

The Y. M. C. A. Building is conveniently located on the campus and is the center of social activities and voluntary religious work.

The Physical Education Building consists of a Field House, a Gymnasium, and the Alumni Section. The field house has been constructed. The other units are under construction at this time.

The Laundry, which is operated exclusively for the students, is a brick building with improved modern machinery.

The Clemson College Hotel, a frame building, is situated on a hill overlooking the campus. This building and numerous brick and frame residences furnish homes for most of the college teachers and officers.

The Calhoun Mansion is located on the Clemson campus. In accordance with the provisions of Mr. Clemson's will, this former residence of John C. Calhoun is a shrine in honor of his memory. Several pieces of furniture and other interesting relics, formerly the property of Mr. Calhoun, are carefully preserved in the Calhoun Mansion, where they may be seen by visitors to the college.

Grounds. The college grounds comprise about 1,544 acres, including the campus, the farm, and the Experiment Station grounds. The two-hundred acre campus is laid out in walks, drives, and lawns, and is shaded by a beautiful grove of native forest trees.

LIVING CONDITIONS

At Clemson students live in barracks under military discipline. A student must at all times be present or accounted for. The barracks or dormitories are divided into "halls" for military purposes, a unit being assigned to a hall under the supervision of a cadet officer.

Cadet officers remain on duty in the guard room both day and night. A long distance telephone with twenty-four hour service is located in the guard room.

Each student room is equipped with necessary furniture. The beds are single width. Bed linen, bed covers, pillows and towels must be furnished by the students.

All students are required to provide themselves with two mattress covers and two clothes bags. These are regulation articles and can be secured only at the College. One set will likely serve for use during the four years.

The dining hall or mess hall is located in Barracks No. 1 and is under the supervision of the mess officer. The mess hall is well equipped with silverware, china, glassware, table linen, etc. The kitchen and cold storage plant is one of the very best in the South. All students living in the barracks eat in the mess hall.

RESERVE OFFICERS' TRAINING CORPS

Under the provisions of the National Defense Act, the War Department has established at Clemson College an infantry unit of the Reserve Officers' Training Corps. All students of the College, unless excused by the President, are required to take a minimum of three hours per week of military training. To be admitted to membership in the corps and to receive the privileges connected therewith, juniors and seniors must be recommended by the President and the Professor of Military Science and Tactics. All members at the completion of the junior class will be required to attend a summer camp, where their expenses will be paid by the Federal Government. After graduation the student may upon the recommendation of his instructors, receive a commission in the Officers' Reserve Corps.

STUDENT HEALTH SERVICE

The Surgeon is one of the regular officers of the College, and his special duty is to look after the health of the students. He has charge of the hospital, and supervises all matters pertaining to the sanitation of barracks.

At a specified time every day, students who so desire may consult the Surgeon, and those who are sick are cared for by experienced nurses in the college hospital. In case of necessity

students are allowed to consult the Surgeon at any time, or send for him, as may be required.

The Surgeon cannot undertake to notify parents every time a student reports to the hospital for medicine, or for rest on account of some slight complaint. However, they may rest assured that they will be promptly notified of sickness of any consequence. In case of serious illness the Surgeon will telegraph them.

The medical fee paid by each student is intended to cover all ordinary cases of sickness and the treatment and medicines necessary. It is not intended to cover fees of doctors or specialists called into consultation, for performing operations, for special nurses, or for any medical or surgical attentions performed away from the College. Such expenses must be borne by the parents. The right of the College Surgeon, with the approval of the President of the College, to incur in behalf of any student under his care any of these extra services is hereby expressly reserved.

The physical education course and intramural athletics, along with a division of corrective gymnastics, are being developed through the Clemson Physical Education Department. Intramural athletics are rapidly drawing an interest, and enthusiasm has exceeded the expectations of the Dean and Director of physical education. In conjunction with the education department, a course in health and physical education is given to students taking advanced work in physical education. This department is under the supervision of the College Surgeon.

RELIGIOUS INFLUENCES

Clemson cooperates with the various churches and the Y. M. C. A. in the religious training of its students.

Four denominations, Baptist, Episcopal, Methodist, and Presbyterian, have erected churches in the community. All Protestant students are required to attend the Sunday morning services at one of the churches. Arrangements are made for services for students of other denominations. Sunday schools and young people's church societies are maintained by the local churches. Attendance upon these services is voluntary.

Free-elective courses in Religion are offered. This work is not financed by the College. For information regarding these courses see list of courses.

HISTORICAL STATEMENT

In 1889, the General Assembly of South Carolina accepted the bequest of Thomas G. Clemson. This bequest set aside the bulk of the Clemson estate for the founding of a scientific and technical college. The institution was also established under the Morrill Land-Grant Act passed by the National Congress in 1862. Clemson College, therefore, is the Agricultural and Mechanical College of South Carolina and is a member of the national system of Land-Grant Colleges and Universities.

Clemson's will and its acceptance by the legislature outline the nature of the institution.

Says the will in part:

"Feeling a great sympathy for the farmers of this State, and the difficulties with which they have to contend in their efforts to establish the business of agriculture upon a proper basis, and believing that there can be no permanent improvement in agriculture without a knowledge of those sciences which pertain particularly thereto, I have determined to devote the bulk of my property to the establishment of an Agricultural College upon the Fort Hill Place. My purpose is to establish an Agricultural College which will afford useful information to the farmers and mechanics; therefore it should afford thorough instruction in agriculture and the natural sciences connected therewith; it should combine, if practicable, physical with intellectual education, and should be a high seminary of learning in which the graduate of the common schools can commence, pursue and finish a course of studies terminating in thorough theoretic and practical instruction in those sciences and arts which bear directly upon agriculture. * * * * but to always bear in mind that the benefits herein sought to be bestowed are intended to benefit agriculture and mechanical industries. * * * * I trust I do not exaggerate the importance of such an institution for developing the material resources of the State, by affording its youth the advantages of scientific culture.

"The desire to establish such a school or college as I have provided for in my said last will and testament, has existed with me for many years past, and many years ago I determined to devote the bulk of my property to the establishment of an Agricultural School or College. To accomplish this purpose is now the one great desire of my life."

This will gave all that part of the Fort Hill estate inherited by Mrs. Clemson from her mother and the bulk of Mrs. Clemson's other real and personal property. The latter amounted to a sum, which, considering the purchasing power at the time, probably has been only a few times exceeded in a public benefaction in South Carolina.

It provided for a Board of Trustees of seven members, to-wit: R. W. Simpson, D. K. Norris, M. L. Donaldson, R. E. Bowen, B. R. Tillman, J. E. Wannamaker, and J. E. Bradley, who with those chosen by the General Assembly should constitute a governing board in case the State accepted the bequest; but, who, in case the State declined the bequest, should alone constitute a governing board for a private institution.

These seven trustees, along with other friends of the movement, and the agricultural groups in the State developed and organized a public opinion favorable to the plan.

In November, 1889, the General Assembly of South Carolina accepted the terms of the will, and, following the decision of the United States Supreme Court to uphold the will, the State of South Carolina and the full Board of Trustees proceeded to convert the dream of Thomas G. Clemson into the reality of Clemson College.

The College was formally opened in July, 1893, with an enrollment of 446 students. The first graduating exercises were held in December, 1896, with a graduating class numbering thirty-seven—fifteen in the agricultural courses and twenty-one in the engineering courses.

	1933-34	Total
ENROLLMENT-REGULAR SESSION	1,108	13,827
Graduates by Courses:		
Agriculture	57	1,634
Agricultural Engineering	7	13
Architecture	10	114
Civil Engineering	13	311
Electrical Engineering	38	375
Mechanical Engineering	15	175
Mechanical Electrical Engineering	0	527
Engineering Industrial Education	13	68
Chemistry	18	113
General Science	18	147
Textile Engineering	11	316
Textile Chemistry	10	41
Textile Industrial Education	0	74
Weaving and Designing	3	7
Bachelor of Science	0	1
Vocational Agricultural Education	20	20
Total	233	3,936

LOCATION

The College is located on the Fort Hill homestead of John C. Calhoun in the picturesque foothills of the Blue Ridge. It has an elevation of 800 feet above sea level and commands an excellent view of the mountains to the north and west, some of which attain an altitude of nearly five thousand feet.

The College is located at Clemson College, S. C., which is one mile from Calhoun, a town on the main line of the Southern Railway, and four miles from Pendleton, on the Blue Ridge Railway. State Highways number 13 and number 24 pass through Clemson, and a bus service is maintained which operates daily at regular intervals.

CLEMSON COLLEGE ALUMNI CORPORATION

The Alumni Corporation has established a permanent office on the campus. The office is in charge of a secretary, who is employed by the Board of Directors of the Corporation. The Clemson office is a clearing house for all matters concerning the alumni. In addition to keeping accurate records of addresses and information concerning alumni, the Corporation has established at the Clemson headquarters a bureau for repairing Clemson class rings, and for securing duplicates of these rings.

The Corporation holds its regular annual meeting at the College on Monday of Commencement. At this meeting all officers are elected. The Secretary is elected by the Board of Directors which is in turn responsible to the general Corporation for the conduct of its business. The purpose of the Alumni Corporation is to serve the College and the alumni in every possible way. All correspondence regarding its affairs is conducted through the Clemson office.

Graduates and former students are requested to keep the Alumni Office informed as to changes of address, occupation, and other matters that will be of interest to those in charge of Alumni Records and mailing lists.

PART III—STUDENT LIFE AND ACTIVITIES

CADET MILITARY ORGANIZATION

Clemson College is operated as a military school,—not for the purpose of making soldiers, but in order that the students may learn important life-lessons of obedience to authority, punctuality, system, courtesy, and loyalty.

The military system places every student on an equal basis. All cadets wear the uniform, live under the same conditions, and are subject to the same privileges and restraints.

The military system does not in any way interfere with the regular college work, but on the other hand enables this to maintain a higher level of efficiency. Military training is a feature that gives to Clemson's graduates an advantage which is an important factor in their future progress and success.

CLUBS AND SOCIETIES

Honor Fraternities. Honor scholarship organizations, including Tau Beta Pi, Phi Psi, Alpha Zeta, Alpha Tau Alpha, and Iota Lambda Sigma, give recognition to superior work done by Engineering, Textile, Agricultural, Agricultural Education, and Industrial Education students, respectively.

The military activities of the cadet officers of the corps are recognized in membership in the Society of Scabbard and Blade, a national military honor fraternity.

The Blue Key, a national fraternity based upon leadership, has a chapter at Clemson.

Student Clubs. Students majoring in various courses of instruction have organized clubs. Among such clubs are included the Agricultural Economics Club, the Dairy Club, the Horticultural Club, the Minaret Club (an architectural organization), and the Athanor (a chemical society).

Two literary societies—the Calhoun and the Palmetto—furnish a valuable supplement to scholastic work.

Engineering Societies. Students majoring in engineering courses are selected for membership in the American Institute of Electrical Engineers, American Society of Mechanical Engineers, and the American Society of Civil Engineers.

THE YOUNG MEN'S CHRISTIAN ASSOCIATION

The Young Men's Christian Association has become the chief social gathering place and is the center of voluntary religious activity. During the current session approximately 600 students have been enrolled in voluntary Bible study classes. Two trained secretaries are employed by the Association.

The Young Men's Christian Association has supervision of the voluntary religious activities of the students and endeavors to serve the religious, social and physical life of the college community in keeping with the general policies of the international organization.

The Sunday night union service is held at the Y. M. C. A. and has been attended by approximately three hundred and fifty each night. Local and visiting leaders speak at these services.

ATHLETICS

It is the policy of the College to sanction and encourage athletics so long as this does not interfere with studies and other duties. Football, baseball, basketball and track are the most popular sports. The College is a member of the Southern Conference and of the South Carolina Intercollegiate Athletic Association.

Intercollegiate Athletics. For the regulation of intercollegiate athletics, the faculty has adopted the following rules:

1. No student shall be eligible for varsity athletics until he has passed twenty-four semester hours. After a student has become eligible for athletics, to be eligible for any ensuing year he must have passed twenty-four semester hours during the previous year.

At the end of each grading period, the faculty athletic committee will canvass the record of athletes, and if any are found

to be so deficient as to endanger their scholastic standing, they will be withdrawn from the squad.

In order to participate in intercollegiate contests, each athletic team may be allowed a maximum absence of ten days during the session (Saturday afternoon, Sunday and holidays not to be included). No one contestant or representative shall be allowed to leave the campus for more than twenty days during the session, except at the discretion of the faculty athletic committee.

2. No member of an athletic team shall be eligible for a managerial position in any other branch of sport.

3. No team shall be allowed to leave the college grounds to participate in any match game unless accompanied by an authorized coach or other member of the faculty, who shall be responsible to the college for the conduct of the players while away.

4. No student shall be eligible to participate in an intercollegiate contest who is away from the College without proper authority, or without having complied with all the rules or orders issued by the President regarding such matters.

5. It shall be the duty of the faculty athletic committee to see that the foregoing rules and regulations are strictly enforced.

MEDALS AND HONORS

Trustees' Medal. The Board of Trustees has established a gold medal to be awarded annually to the best speaker among the representatives of the literary societies at Commencement. The medal was won in 1934 by Cadet M. I. Garber, Barnwell County.

Norris Medal. The following is from the will of Hon. D. K. Norris, a life trustee of Clemson, who died in 1905:

"I give $500 face value, Norris Cotton Mill stock . . . on condition the dividend thereon shall be applied annually to the purchase of a gold medal, to be known as the 'Norris Medal', to be awarded to the student of Clemson meriting the same at graduation, under such rules and conditions as may be prescribed

by the said Board of Trustees, and which medal shall have engraved on it 'Honor habet onus' (Honor brings responsibility)."

In 1934 the medal was awarded to Cadet R. B. Shores, Spartanburg County.

R. W. Simpson Medal. A medal designated as the "R. W. Simpson Medal" is awarded annually to the best drilled cadet in the freshman, sophomore, or junior class. In 1934 the medal was awarded to Cadet D. C. Moore, Gainesville, Georgia.

Arnold R. Boyd English Honor Key. Arnold R. Boyd, '14, now a lawyer in New York, donates this Honor Key annually to the student in the graduating class who makes the highest average in English during his college course. In 1934 this key was awarded to Cadet D. S. Moon, Oconee County.

Farmers' Certificate of Merit. Beginning with the session of 1914-1915 certificates of merit have at times been awarded to two farmers in South Carolina who have rendered distinguished service in the agricultural development of the State. In 1934 these certificates were awarded to Mr. W. A. Campbell of Sheldon and Mr. J. M. Harrison of Charleston.

National Association of Cotton Manufacturers Medal. For several years this medal has been awarded to the outstanding graduate in Textile Engineering. In 1934 the medal was won by Cadet J. T. Rouse, Hampton County.

PART IV—ORGANIZATION AND GOVERNMENT

ADMINISTRATIVE ORGANIZATION

Board of Trustees. The government of the College is vested in a Board of thirteen members, six of whom are elected by the Legislature and seven life and self-perpetuating under the Clemson will. The function of this Board is legislative and not executive. The Board determines the general policy of the College, makes the laws for its government, and directs the expenditure of its funds.

The President is the chief executive and administrative officer of the Board of Trustees. He is the head of the College and is responsible for its satisfactory working and success.

The College is divided into schools of Agriculture, General Science, Chemistry, Engineering, Textiles, and Vocational Education. A dean is at the head of each school and is responsible to the President for its conduct and success. The schools are comprised of departments. Each department is in charge of a professor who acts as head of the department. The President conducts all official business with each department through its dean.

The Faculty consists of all officers of instruction in the College. The voting members are the deans, professors, associate professors, and assistant professors.

The faculty meets at least once a month, or whenever called by the President, and is an advisory body to the President, on the instructional work of the College and on such other business as he may bring before it.

The deans and directors of the various schools and departments meet weekly or when called by the President for consideration of matters affecting the welfare of the College. Departmental faculty meetings are held periodically.

Faculty Committees. In order to aid him in his executive duties and to carry on the instructional work of the College, the President appoints committees from the faculty. To these are

assigned certain specified lines of work and the committees are clothed with full authority.

The Discipline Committee. The Discipline Committee is composed of six directors of departments and two full professors elected annually by the Board of Trustees. This committee constitutes the court of the College and tries cadets charged with serious offenses under the regulations. The President is the reviewing authority of the Discipline Committee, and may at his discretion set aside or modify the sentences imposed. A parent, or a cadet over age, has the right to appeal from the sentence of the Discipline Committee to the Board of Trustees, provided the appeal is lodged with the President of the College within thirty days. This appeal must be forwarded to the President of the Board of Trustees, who if he deems the appeal meritorious, shall present it at the next regular or called meeting of the Board.

All trials by the Discipline Committee are open to the public, and all testimony is taken under oath and recorded stenographically as is in a civil court. A student on trial may have some member of the faculty to assist him in his defense if he so desires.

MILITARY ORGANIZATION

The President. The President of the College shall have the general command and government of the institution, watching over its administration, discipline and instruction. He shall have authority to make rules from time to time, governing the granting of permits and furloughs to cadets; to inspect anything in a cadet's room or personal baggage; to suspend or modify these regulations, or to publish special regulations when he considers it necessary, which shall have the authority of the Board of Trustees until they shall act on the same. He shall prescribe the hours of study, drill and recreation.

Commandant. The Commandant of Cadets, under the President, has supervision of the discipline of the Corps of Cadets. He shall prescribe the order in which the furniture, bedding, books, clothing, equipment, etc., shall be arranged throughout the barracks and shall make a thorough inspection of the rooms, furniture,

arms, equipment and uniforms of the cadets at least once each week. He shall have the right to inspect anything in a cadet's room or personal baggage. He shall perform such other duties as are prescribed in these regulations. He shall have the rank of Colonel.

Assistant Commandants. The Assistant Commandants shall perform such duties as may be prescribed for them by the President or Commandant.

Military Instruction. All students, excepting such students as are excused by the President, must take a minimum of three hours military instruction per week. All who pass the required physical examination must take the Basic Course prescribed by the War Department for the R. O. T. C. during their freshman and sophomore years.

Members of the junior and senior classes are selected by the Professor of Military Science and Tactics, subject to the approval of the President, to take the Advanced Course prescribed for the R. O. T. C., receiving certain financial benefits allowed by the Federal Government.

Cadet Officers and Non-commissioned Officers. The cadet officers and non-commissioned officers are appointed by the Professor of Military Science and Tactics, subject to the approval of the President. When practicable they shall be appointed from members of the R. O. T. C. who have been most studious and soldier-like in the performance of their duties and most exemplary in their conduct. No cadet may decline any office to which he may be appointed.

As a rule the officers shall be appointed from the senior class, the non-commissioned officers, except corporals, from the junior class, and the corporals from the sophomore class.

Study Hours and Class Hours. Study hours are those parts of the day which are designated for study and shall be prescribed in orders. All hours at which a student has no classes or other duties may be used as study hours and students are expected to use vacant hours during the day as well as the study period after supper for study. Classes are scheduled from 8 A. M. to 6 P. M.

daily except Saturday. Classes are scheduled to 1 P. M. Saturday.

Any cadet who has been granted a furlough or pass and who stays over the time stipulated will be awarded such punishment as The Commandant may prescribe subject to the approval of the President. In case a cadet is prevented by sickness from returning at the stipulated time he must submit a certificate from his attending physician. However no such certificate will be accepted unless The Commandant has been notified in advance of the expiration of the furlough.

Furlough and Passes. Any cadet who has been granted a furlough or pass and who stays over the time stipulated, unless for sickness or other good and valid reason acceptable to the Commandant, will be awarded a punishment not to exceed one month's arrest and twenty demerits. In case a cadet is prevented by sickness from returning at the stipulated time, he must submit a certificate from his attending physician. However, no such certificate will be accepted unless the President or the Commandant has been notified in advance of the expiration of the furlough.

Cadets returning late on furlough or pass are placed in room arrest pending an investigation of the reason of the late return.

All communications from parents requesting furloughs for their sons must be addressed or sent directly to "The Commandant", and must set forth fully the reason for the request. No furlough will be granted unless the reasons given are considered satisfactory and sufficient justification for any loss of time for absence from classes or other duties. Telegrams which do not explain fully will not be accepted as complying with the above rules. In any case in which business is given as a reason, the nature of the business must be explained fully.

A parent has the right to demand a discharge from college at any time and for any reason, but the college authorities reserve the right to grant or refuse to grant furloughs.

Week-End Leaves. Week-end leaves will be granted under conditions prescribed by the President.

Demerits. Any regular cadet who may receive within any one semester more than 100 demerits during his freshman year, or more than 80 demerits during his sophomore year, or more than 70 demerits during his junior year, or more than 65 demerits during his senior year; or any day cadet who may receive within any one semester more than 80 demerits during his freshman year, or more than 70 demerits during his sophomore year, or more than 60 demerits during his junior year, or more than 50 demerits during his senior year shall be required, by the President, to immediately withdraw from college.

Discharge. No cadet unless twenty-one years of age and paying his own way at college shall be honorably discharged except on the written application of his parents or guardian addressed to the President, or for reasons satisfactory to the President.

SCHOLASTIC REGULATIONS

1. The semester hour shall be the basis of all credits. One recitation hour or three laboratory or shop hours a week if self-contained, or two if considerable work is required out of the class period, shall constitute a semester hour.

2. The standing of a student in his work at the end of a semester shall be based on daily class work, regularity of attendance, tests or other work, and the final examinations.

3. Written examinations shall be required in all subjects at the end of each semester, except in certain laboratory or practical courses where not deemed necessary by the departmental faculty. A student who has been absent from more than one-fourth of the total number of class periods in any subject for a semester is debarred from the final examination.

4. A semester grade once reported to the Registrar shall be the final grade for the period covered.

5. No semester grade shall be given out or posted until the last day of the examination period. Grades will then be posted by instructors as promptly as possible.

6. When an instructor completes a subject he may hold an examination on it before beginning the next subject, provided such examination does not conflict with the regularly scheduled work.

7. *Reports and Grades.*—Semester reports are mailed to parents after the end of each semester (usually within two or three weeks). Mid-semester reports do not form a part of the permanent record in the Registrar's office, but are sent to parents for their information.

The grading system shall be as follows:

A—Excellent. Indicates that the student is doing work of a very high character. The highest grade given.

B—Good. Indicates work that is satisfactory, though not of the highest order.

C—Fair. Indicates work of average or medium character.

D—Pass. Indicates work below the average and unsatisfactory. The lowest passing grade. For promotion to the junior and senior classes a student must have a grade above D on 50 per cent of his total credit hours. For graduation this average is also required.

E—Conditioned. Indicates a failure to satisfy the requirements as to daily recitations, tests or other work, as well as to the final examination, which condition in the opinion of the instructor may be made up by reexamination at some fixed time.

F—Failed. Indicates that a student knows so little of the subject that it must be repeated in order that credit may be received.

I—Incomplete Work. Indicates that a relatively small part of the semester's work remains undone. A grade *I* is not to be given a student who has made a grade *F* on his daily work.

"I-Abs. Ex." Indicates absence from examination on account of sickness or other satisfactory reason.

8. *Absences from Class. Removal of Grade I.*

Instructors report on class attendance every day they have classes whether or not there are absences.

Students should not request instructors to excuse them from classes or to change class periods or examinations. Instructors have no authority to grant such requests. In cases of emergency permits may be applied for through the Commandant.

A student who has been absent from class for more than three weeks will be dropped from the roll, and his grade card will be returned by his instructor to the Registrar's office. Such a student will be readmitted only by permission from the Registrar.

All class work missed on account of absences for good and sufficient reasons shall be made up to the satisfaction of the instructor within thirty days after the student returns to classes.

All incomplete grades (*I's*) for first semester not removed within thirty days after the beginning of the second semester shall become *F's*. All incomplete grades (*I's*) for second semester not removed within thirty days after the beginning of the first semester shall become failures (*F's*), and must be taken over as such.

A student who, for reasons satisfactory to the faculty, is absent from any of the first semester examinations will be graded *I-Abs. Exam.* and will be allowed to make up these examinations during the second semester at the period scheduled for this work. A student who is absent from any of the second semester examinations, for satisfactory reasons, shall stand them during the make-up period in September. A student who is absent from an examination without excuse is graded F.

9. *Special Examinations.* Any request for a special examination must be approved by (1) the instructor concerned, (2) the head of the department concerned, (3) the dean of the school, and (4) the registrar. Special examinations are given only on payment of a $2 fee for each examination. Forms for request may be secured at the Registrar's office. The fee must be paid to the Treasurer. When conditions are complied with and approved, a Special Examination Permit will be issued by the Registrar.

10. *Removal of Conditions.* Only one opportunity shall be given a student to remove a condition (*E*) by a reexamination.

A student who fails to pass such a reexamination shall be required to repeat the subject hour for hour in class. Not more than twelve credit hours of conditions for a session shall be removed by reexamination. A student shall not receive a grade higher than *D* when a deficiency is removed by reexamination.

Reexaminations shall be held as scheduled by schedule committee. All conditions (*E's*) not removed during the time set aside for reexaminations shall become failures. Seniors may remove conditions during the week preceding Commencement.

11. *Removal of Failures.* A student who has failed (made a grade *F*) in a subject cannot receive credit for that subject until it has been repeated hour for hour in class, except that in the case of correlated laboratory work, the number of hours to be taken shall be determined by the instructor. Where separate grades for class and laboratory work are given, that part of the subject shall be repeated in which the failure occurs.

12. *Withdrawals on Account of Unsatisfactory Work.* A student who at the end of the first semester has failed (made a grade *F*) on nine or more credit hours of work shall be required to withdraw from college. A student who at the end of the session has failed (made a grade *F*) on eighteen or more credit hours of work shall not be permitted to return the following session. (Should the application of this rule at the end of the first semester not be to the best interest of an individual student, he may be permitted to continue on probation and schedule a fewer number of hours. Such a student carrying less than a normal schedule must pass on all his work at the end of the next semester or be required to withdraw.)

Any student whose record is generally unsatisfactory at the end of a semester may be dropped from the College. Students and their parents are hereby warned of this probable action.

13. *Promotion and Classification.* Promotion is by subjects; but a student is classified according to the amount of college work completed. The term freshmen is used to apply to new students with the exception of those who have completed as much as a full year of college work elsewhere. Old students who have not passed as much as 25 semester credit hours are

also designated as freshmen. To be a sophomore a student must have to his credit at least 25 semester hours and to be a junior a minimum of 65 credits with a grade above *D* on 50 per cent of the credit hours is required. A student must be within forty credits of the requirements for graduation in his course and must have completed all of his required freshman and sophomore subjects in which he has failed before he may be enrolled as a senior or hold any office or appointment reserved by the faculty for seniors. Every student is responsible for knowing the requirements of his course and his status in regard to meeting these requirements.

14. *Amount of Class Work Permitted and Required. Prerequisites.* The normal amount of work a student is expected to schedule shall be the number of credit hours listed in the curriculum which he is pursuing, plus a proportionate number of electives as explained under "Requirements for Degree". A student shall not be permitted to schedule extra subjects or take over in addition to his normal schedule any work unless he has made during the preceding semester a grade of *B,* or above, on at least 50 per cent of the total scheduled credit hours. Not more than five clock hours of work may be scheduled in addition to the number of credit hours prescribed in the curriculum.

A continuation subject in the next higher class shall not be scheduled until credit has been received for its prerequisites.

15. *Dropping Class Work.* Upon the recommendation of the instructor and the director concerned to the President, a student's standing will be investigated and he may be required to drop a subject because of neglect, or lack of application or preparation. No student will be dropped under this rule without approval by the President.

A student who at the end of a semester makes a grade *F* on six, but not more than eight, credit hours of work or who makes a grade *E* on ten or more credit hours of work, shall be required to drop from his schedule at least one theoretical subject. (See Rule 12.)

A subject dropped after the middle of the semester is recorded as a subject failed, unless the student shall have a daily

average of "*C*" or above in that subject, in which case it will be recorded as "subject dropped".

16. *Time of Scheduling Work.* All students shall register for classes during the class registration period. A fee of two dollars is charged for late registering for class work.

17. *Deficiencies in Year Courses.* A student who receives a grade *F* on a first-semester subject that is prerequisite for a second-semester subject shall not schedule such second-semester subject without permission of the re-examination and promotion committee and the dean of the school concerned.

18. *How to Raise a Grade E.* A grade *E* may be removed as prescribed in Section 11. However, if a student makes a grade *E* in a subject which continues beyond the first semester and to the end of the second semester, the instructor may at the end of the session recommend that the grade be raised to a *D*, provided the grade made on the work of the second semester is *A* or *B*. In such a case the recommendation of the instructor shall be made a special report, must be approved by the dean of the school, and must accompany the grades of the second semester.

19. *Promotion to the Junior and Senior Classes.* A student shall not be permitted to enroll in the senior class until all the work of the freshman and sophomore classes has been completed. A student shall not be admitted to the junior or senior classes who has not received grades above *D* on 50 per cent of his credit hours. (See also Rule 13 above)

20. *Requirements for Graduation.* For graduation a student must have completed as many credit hours as are required in his course with a grade above *D* on 50 per cent of the total credit hours. All work must be completed before 5 P. M. on the Friday preceding Commencement.

Residence of at least one regular session shall be required for graduation.

21. *Seniors Failing to Graduate.* A senior who fails to graduate because of either one *E* or one *F* on any subject shall have an opportunity of removing it by examination during the make-up period in September, provided he can furnish evidence

of having done satisfactory study. Failing to do this he shall take the subject over with the next class.

22. *Change in Course.* Aimless shifting is discouraged; but for good reasons a change in course may be made at end of any semester. The student must meet the full requirements of the course to which he changes.

23. *Textbooks and Supplies.* Each student shall be required to own his individual textbooks and the necessary equipment, except in the case of brothers in the same class who room together.

All requests from the students to the faculty must be made in writing.

PART V.—REQUIREMENTS FOR DEGREES, COURSES OF STUDY

BACHELOR OF SCIENCE DEGREE

The degree of Bachelor of Science is awarded to those students who satisfactorily complete one of the four-year curricula. In addition to the prescribed courses at least fourteen hours of *free electives* are allowed. Other electives are subject to the approval of the dean of the school in which the major course is taken. For rules governing scholastic work, see the scholastic regulations.

All work for a degree must be completed by 5 P. M. on the Friday preceding graduation exercises. Residence of at least one regular session is required for graduation. Every candidate for a degree must pay to the Treasurer of the College the cost of his diploma before 5 P. M. on the Friday preceding graduation.

If all work toward a degree is not completed within five years after entrance, the student may be required to take additional courses.

PROFESSIONAL DEGREE IN ENGINEERING

The College offers the following professional engineering degrees: Civil Engineer, Electrical Engineer, and Mechanical Engineer.

The requirements for these degrees are: (a) a Bachelor's degree from Clemson College in one of these three branches in engineering, (b) five years of subsequent professional experience, one year of which must have been in responsible charge of engineering or engineering instruction, (c) the preparation of a thesis demonstrating distinct technical ability. Detailed information regarding professional degrees may be obtained from the Registrar.

COURSES OF STUDY

Twenty-four undergraduate courses of study are offered in the Schools of Agriculture, Chemistry, Engineering, General Science, Textiles, and Vocational Education. The major courses under each department are indicated below:

School of Agriculture
- Agronomy
- Animal Husbandry
- Agricultural Economics
- Agricultural Engineering
- Dairy
- Entomology
- Forestry
- Horticulture

School of Chemistry
- Chemistry

School of General Science
- General Science
- Pre-Medical
- Pre-Professsional

School of Engineering
- Architecture
- Chemical Engineering
- Civil Engineering
- Electrical Engineering
- Mechanical Engineering

School of Textiles
- Textile Engineering
- Textile Chemistry and Dyeing
- Weaving and Designing

School of Vocational Education
- Agricultural Education
- Education (Teaching of Science)
- Industrial Education
- Textile Industrial Education

In addition to the work in these regular courses, the college offers the opportunity for certain work after graduation to properly qualified students from this and other institutions. This work may be of an advanced nature or may be a special program of undergraduate studies. Students interested in work along this line should consult the Registrar or the Head of the Department concerned.

While the college is glad to assist all who ask for help in securing employment, it does not guarantee positions to those who complete any of the courses of study.

In the curricula which follow are given the official title and number of the course, the descriptive title, the number of semester hours credit, and in parentheses the number of hours per week in class and laboratory, respectively.

SCHOOL OF AGRICULTURE

The required curriculum in agriculture consists of fundamental and comprehensive subject matter in the School of Agriculture supplemented with courses in English, mathematics, and in the natural and social sciences. In addition to the courses re-

quired opportunity is given for a broad selection of courses in the School of Agriculture and other schools of the College, which will prepare students for farming, positions as county agricultural agents, specialists and technicians in many fields of agriculture and allied industries and other occupations of usefulness in an agricultural community.

The minimum requirements for the degree of Bachelor of Science in Agriculture are as follows:

Required courses in other schools	48 1/3 credits
Required courses in School of Agriculture	56 1/3 credits
Electives (of which 14 are free electives)	41 credits
Total minimum credits required	145 2/3

The number of credits a student shall earn during each semester of the freshman and sophomore years are prescribed in the curriculum. Electives, of which 16 must be in the School of Agriculture, during the junior and senior years must be selected to bring the number of semester credit hours up to not less than 16 and not more than 20 in each semester.

All students in the School of Agriculture with the exception of those electing agricultural engineering, pursue the same curriculum during the freshman and sophomore years. Certain courses are also required of all agricultural students during the junior and senior years. In the junior and senior years a student may elect to major in agricultural economics, agronomy, animal husbandry, dairying, entomology, forestry or horticulture. Sufficient courses will be elected to complete the requirements for graduation. Students who desire to pursue a general course in agriculture without reference to any major subject shall at the beginning of their junior year consult the dean of the school who will designate an advisor, who shall assist in selecting courses and arranging schedules to meet the needs of the students and requirements for graduation.

Students in the School of Agriculture may also complete the requirements for graduation in Agricultural Education by completing the courses required for the Junior and Senior years in the Agricultural Education Curriculum.

Students of the School of Agriculture are given an opportunity to become familiar with the work of the agricultural experi-

ment station, the extension service, crop pest commission, and fertilizer inspection and analysis, all of which head up at Clemson. They also have opportunity to work on thesis problems in cooperation with members of the agricultural experiment station staff and in this way gain an insight into the methods employed in scientific research.

AGRICULTURE

Basic Curriculum
Required of all Agricultural Students

(Except those in Agricultural Engineering)

Freshman Year

First Semester			*Second Semester*		
Agr. 11, Field Crops	3	(3,0)	A. H. 12, Types, Breeds and Market Classes	3⅔	(3,2)
Bot. 13, Agricultural	2⅔	(2,2)	Bot. 14, Agricultural	3⅓	(2,4)
Chem. 11, General	3⅔	(3,2)	Chem. 12, General	3⅔	(3,2)
Drawing 11, Freehand	⅔	(0,2)	Drawing 12, Mechanical	⅔	(0,2)
English 15, Comp. and Am. Lit.	3	(3,0)	English 16, Comp. and Am. Lit.	3	(3,0)
Math. 17, Gen. Science Math.	3	(3,0)	Math. 18, Gen. Science Math.	3	(3,0)
M. S. 11, Military Science	1	(0,3)	M. S. 12, Military Science	1	(0,3)
M. E. 16, Woodwork	⅔	(0,2)			
	17⅔			18⅓	

Sophomore Year

Chem. 21, Organic	2⅔	(2,2)	Ag. Ec. 22, Ag. Econ.	3	(3,0)
Dairy 21, Dairying	3⅔	(3,2)	Agr. 20, Soils	2⅔	(2,2)
English 21, Lit. and Adv. Comp.	2	(2,0)	Agr. 22, Farm Mach.	2⅔	(2,2)
Geol. 21, Agricultural	3	(3,0)	Chem. 22, Agricultural	2⅔	(2,2)
M. S. 21, Military Science	1	(0,3)	For. 22, Forestry	2⅔	(2,2)
Physics 29	4⅓	(3,4)	English 22, Lit. and Adv. Comp.	2	(2,0)
Z. and E. 21, Zoology	2⅔	(2,2)	Hort. 22, General	3⅔	(3,2)
			M. S. 22, Military Science	1	(0,3)
	19⅓			20⅓	

Junior Year

A. H. 31, Feeds and Feeding	2⅔	(2,2)	Ag. Ec. 32, Farm Org. and Mgt.	2⅔	(2,2)
Bact. 31, General	3⅓	(2,4)	Agr. 32, or Dairy 32, Genetics	2⅔	(2,2)
Z. and E. 31, Introd. and Appl. Ent.	2⅔	(2,2)	M. S. 32, Military Science	⅔	(0,2)
M. S. 31, Military Science	1	(0,3)	P. H. 32, Farm Poultry	3⅔	(3,2)
Major and Electives	8⅓-10⅓		Major and Electives	8⅓-10⅓	
	18-20			18-20	

Senior Year

*Agr. 31, Fertilizers and Manures	2	(2,0)	Ag. Ec. 42, Rural Soc.	3	(3,0)
E. and G. 41, Political Science	3	(3,0)	M. S. 42, Military Science	⅔	(0,2)
M. S. 41, Military Science	1	(0,3)	Major and Electives	12⅓-16⅓	
Major and Electives	12-14				
	18-20			16-20	

*Agronomy students take Agronomy 31 in the Junior Year and schedule two hours additional elective in the Senior Year.

AGRICULTURAL ECONOMICS MAJOR

Junior Year

First Semester

Required in Basic Curriculum	9⅔	
Ag. Ec. 33, Stat. Methods	2⅔	(2,2)
Electives	3⅔-7⅔	
	16-20	
Suggested Electives:		
Eng. 31, Public Speaking	2	(2,0)
Hist. 31, Hist. of Civilization	3	(3,0)
E. and G. 21, Economics	2	(2,0)
French 11 or German 11	3	(3,0)

Second Semester

Required in Basic Curriculum	9⅔	
Ag. Ec. 34, Public Finance	2⅔	(2,2)
Electives	3⅔-7⅔	
	16-20	
Suggested Electives:		
Eng. 32, Business Law	2	(2,0)
Hist. 32, Hist. of Civilization	3	(3,0)
Agr. 30, Forage Crops	3	(3,0)
French 12 or German 12	3	(3,0)

Senior Year

Required in Basic Curriculum	6	
Ag. Ec. 41, Principles Marketing	3	(3,0)
Ag. Ec. 43, Agricultural Finance	2	(2,0)
Ag. Ec. 45, Farm Accounting	2⅔	(2,2)
Ag. Ec. 51, Seminar	1	(1,0)
Electives	1⅓-5⅓	
	16-20	
Suggested Electives:		
E. and G. 21, Economics	2	(2,0)
French 21 or German 21	3	(3,0)
Agr. 45, Crop Nutrition	2	(2,0)
Hort. 41, Syst. Pomology	2⅔	(2,2)
Eng. 31, Public Speaking	2	(2,0)
Ag. Ec. 47, Farm Problems	2	(2,0)

Required in Basic Curriculum	3⅔	
Ag. Ec. 46, Farmer Movements	3	(3,0)
Ag. Ec. 44, Land Economics	3	(3,0)
Ag. Ec. 52, Seminar	1	(1,0)
Geol. 40, Econ. Geography	3	(3,0)
Electives	2⅓-6⅓	
	16-20	
Suggested Electives:		
Sociol. 31, Sociology	2	(2,0)
French 22 or German 22	3	(3,0)
Agr. 42, Soil Fert. and Mgt.	2	(2,0)
Hort. 42, Com. Pomology	2⅔	(2,2)

AGRONOMY MAJOR

Junior Year

First Semester

Required in Basic Curriculum	9⅔	
Agr. 31, Fert. and Manures	2	(2,0)
English 31, Public Speaking	2	(2,0)
Electives	2⅓-6⅓	
	16-20	
Suggested Electives:		
Agr. 55, Ag. Survey. & Drain	3	(2,3)
Hort. 31, Plant Prop.	2⅔	(2,2)
Psychol. 35, Psychol. for Teachers	3	(2,2)

Second Semester

Required in Basic Curriculum	9⅔	
Agr. 30, Forage Crops	3	(3,0)
Bot. 30, Plant Phys.	3⅓	(2,4)
Electives	0-4	
	16-20	
Suggested Electives:		
Psychol. 36, Psychol. for Teachers	3	(2,2)

Senior Year

Required in Basic Curriculum	4	
Agr. 53, Cotton	2	(2,0)
Agr. 45, Crop Nutrition	2	(2,0)
Agr. 47, Adv. Crop Lab.	⅔	(0,2)
Agr. 49, Plant Breeding	2⅔	(2,2)
Agr. 51, Seminar	1	(1,0)
Agr. 61, Thesis	1	(0,3)
Electives	2⅔-6⅔	
	16-20	
Suggested Electives:		
Bot. 41, Field Crop Diseases	2⅔	(2,2)
Geol. 33, Mineralogy	2⅔	(2,2)

Required in Basic Curriculum	3⅔	
Agr. 42, Soil Fert. and Mgt.	2	(2,0)
Agr. 44, Adv. Soil Lab.	⅔	(0,2)
Agr. 52, Seminar	1	(1,0)
Agr. 62, Thesis	1	(0,3)
Bact. 44, Soil Microbiology	3	(2,3)
Electives	4⅔-8⅔	
	16-20	
Suggested Electives:		
Y. M. 28, Cotton Grading	⅔	(0,2)
Geol. 40, Econ. Geography	3	(3,0)
Ag. Ec. 44, Land Economics	3	(3,0)

ANIMAL HUSBANDRY MAJOR

Junior Year

First Semester

Required in Basic Curriculum	9⅔	
A. H. 35, Farm Meats	2	(0,6)
A. H. 33, Livestock Management	2⅔	(2,2)
Electives	1⅔-5⅔	
	16-20	

Suggested Electives:

English 31, Pub. Speaking	2	(2,0)
Agr. 35, Farm Motors	3	(2,3)
Psychol. 35, Psychology	2⅔	(2,2)
Ag. Ec. 31, Statistical Methods	2⅔	(2,2)
Dairy 31, Judging	⅔	(0,2)

Second Semester

Required in Basic Curriculum	9⅔	
A. H. 32, Judging	⅔	(0,2)
A. H. 34, Pork Production	2⅔	(2,2)
Electives	3-7	
	16-20	

Suggested Electives:

Agr. 30, Forage Crops	3	(3,0)
Hort. 32, Prin. Veg. Prod.	2⅔	(2,2)

Senior Year

Required in Basic Curriculum	6	
A. H. 41, Animal Nutrition	2	(2,0)
A. H. 43, Beef Production	2⅔	(2,2)
Vet. 41, Anatomy and Phys.	2⅔	(2,2)
Electives	2⅔-6⅔	
	16-20	

Suggested Electives:

P. H. 41, Judging and Breeding	2⅔	(2,2)
Ag. Ec. 45, Farm Accounts	2⅔	(2,2)
Agr. 55, Ag. Surveying and Drainage	3	(2,3)
Eng. 31, Public Speaking	2	(2,0)
Ag. Ec. 43, Ag. Finance	2	(2,0)

Required in Basic Curriculum	3⅔	
A. H. 40, Animal Breeding	2⅔	(2,2)
A. H. 42, Sheep Production	2⅔	(2,2)
A. H. 52, Seminar	2	(2,0)
Electives	5-9	
	16-20	

Suggested Electives:

Vet. 42, Diseases	2⅔	(2,2)
P. H. 42, Adv. Poultry	2⅔	(2,2)
Dairy 48, Nutrition	2	(2,0)
Hort. 44, Truck Crops	2⅔	(2,2)
Eng. 49, Ag. Journalism	2	(2,0)
Agr. 42, Soil Fert. and Mgt.	2	(2,0)

DAIRY MAJOR

Junior Year

First Semester

Required in Basic Curriculum	9⅔	
Dairy 35, Feeding and Mgt.	2⅔	(2,2)
Dairy 31, Judging	⅔	(0,2)
Electives	3-7	
	16-20	

Suggested Electives:

Eng. 31, Public Speaking	2	(2,0)
Ag. Ec. 33, Stat. Methods	2⅔	(2,2)
Psychol. 35, Psychology	3	(2,2)
Agr. 35, Farm Motors	3	(2,3)

Second Semester

Required in Basic Curriculum	9⅔	
Chem. 38, Dairy Chemistry	3	(2,3)
Dairy 34, Cream. Org. and Management	3	(3,0)
Electives	⅓-4⅓	
	16-20	

Suggested Electives:

Eng. 32, Business Law	2	(2,0)
Agr. 30, Forage Crops	3	(3,0)
A. H. 34, Pork Production	2⅔	(2,2)

Senior Year

Required in Basic Curriculum	6	
Dairy 41, Dairy Manufactures	3	(2,3)
Dairy 43, Breeding	1⅔	(1,2)
Dairy 51, Seminar	1	(1,0)
Vet. 41, Anatomy and Physiology	2⅔	(2,2)
Electives	1⅔-5⅔	
	16-20	

Suggested Electives:

Ag. Ec. 43, Agri. Finance	2	(2,0)
P. H. 41, Poultry Judging and Breeding	2⅔	(2,2)
Agr. 55, Survey. and Drainage	3	(2,3)
Eng. 31, Public Speaking	2	(2,0)
Ag. Ec. 47, Farm Problems	2	(2,0)

Required in Basic Curriculum	3⅔	
Bact. 40, Dairy Bact.	3	(2,3)
Dairy 42, Dairy Manufacturing	3⅓	(2,4)
Dairy 48, Nutrition	2	(2,0)
Dairy 52, Seminar	1	(1,0)
Electives	3-7	
	16-20	

Suggested Electives:

Eng. 49, Agr. Journalism	2	(2,0)
Agr. 46, Farm Buildings	3	(2,3)
Vet. 42, Diseases	2⅔	(2,2)
P. H. 42, Poultry	2⅔	(2,2)
Agr. 42, Soil Fert. Management	2	(2,0)
Hort. 44, Truck Crops	2⅔	(2,2)

FORESTRY MAJOR

The curriculum for the forestry major will be available at the Registrar's Office shortly after January 1, 1935.

HORTICULTURAL MAJOR

Junior Year

First Semester

Required in Basic Curriculum	9⅔	
Hort. 33, Prin. Veg. Production	2⅔	(2,2)
Hort. 31, Plant Propagation	2⅔	(2,2)
Electives	1-5	
	16-20	
Suggested Electives:		
Hist. 31, Hist. of Civilization	3	(3,0)
Eng. 31, Public Speaking	2	(2,0)
Ag. Ec. 33, Stat. Methods	2⅔	(2,2)

Second Semester

Required in Basic Curriculum	9⅔	
Botany 30, Plant. Phys.	3⅓	(2,4)
Hort. 32, Land Gardening	2⅔	(2,2)
Electives	⅓-4⅓	
	16-20	
Suggested Electives:		
Ag. Ec. 34, Public Finance	2⅔	(2,2)
Eng. 32, Business Law	2	(2,0)
Hist. 32, Hist. of Civilization	3	(3,0)

Senior Year

Required in Basic Curriculum	6	
Bot. 43, O. and T. Crop Diseases	2⅔	(2,2)
Hort. 43, Systematic Olericulture	2⅔	(2,2)
Hort. 41, Syst. Pomology	2⅔	(2,2)
Hort. 51, Seminar	1	(1,0)
Electives	1-5	
	16-20	
Suggested Electives:		
Hort. 45, Land. Design	2	(1,3)
Ag. Ec. 41, Prin. of Marketing	3	(3,0)
Agr. 55, Ag. Sur. and Drainage	3	(2,3)
Agr. 49, Plant Breeding	2⅔	(2,2)

Required in Basic Curriculum	3⅔	
Hort. 42, Com. Pomology	2⅔	(2,2)
Hort. 44, Truck Crops	2⅔	(2,2)
Hort. 52, Seminar	1	(1,0)
Electives	6-10	
	16-20	
Suggested Electives:		
Hort. 46, Floriculture	2⅔	(2,2)
Hort. 48, Land. Design	2	(1,3)
Geol. 40, Economic Geog.	3	(3,0)
Geol. 42, Meteorology	2	(2,0)
Agr. 42, Soil Fert. and Mgt.	2	(2,0)
Z. and E. 42, Ec. Entomology	2⅔	(2,2)

ZOOLOGY AND ENTOMOLOGY MAJOR

Junior Year

First Semester

Required in Basic Curriculum	9⅔	
Z. and E. 33, Adv. Zoology	2⅔	(2,2)
Electives	3⅔-7⅔	
	16-20	
Suggested Electives:		
M. L. 11, German 11	3	(3,0)
Eng. 31, Public Speaking	2	(2,0)
Hist. 31, Hist. of Civ.	3	(3,0)

Second Semester

Required in Basic Curriculum	9⅔	
Z. and E. 32, Gen. Entomology	3⅓	(2,4)
Electives	3-7	
	16-20	
Suggested Electives:		
M. L. 12, German 12	2	(2,0)
Bot. 30, Plant Phys.	3⅓	(2,4)
Eng. 32, Business Law	2	(2,0)

Senior Year

First Semester

Required in Basic Curriculum	6	
Z. and E. 41, Econ. Entomology	2⅔	(2,2)
Z. and E. 45, Ins. Morphology	2⅔	(2,2)
Bot. 43, O. & T. Diseases	2⅔	(2,2)
Z. and E. 51, Seminar	1	
Z. and E. 59, Introd. to Research	1⅔	(1,2)
Electives	0-3⅓	
	16⅔-20	
Suggested Electives:		
Ag. Ec. 31, Stat. Methods	2⅔	(2,2)
Psychol. 35, Psychol. for Teachers	3	(2,2)

Second Semester

Required in Basic Curriculum	3⅔	
Z. and E. 42, Econ. Ent.	2⅔	(2,2)
Z. and E. 44, Beekeeping	1⅔	(1,2)
Z. and E. 46, Systematic Ent.	1⅔	(1,2)
Z. and E. 52, Seminar	1	(1,0)
Electives	5⅓-9⅓	
	16-20	
Suggested Electives:		
Geol. 42, Meteorology	2	(2,0)
Eng. 49, Agri. Journal	2	(2,0)
Psychol. 36, Psychology for Teachers	3	(2,2)
Sociol. 31, Sociology	2	(2,0)

AGRICULTURAL ENGINEERING

This course is provided for the training of students in the principles of engineering as applied to agriculture. Due to the rapidly increasing demand for the services and advice of men, trained in both agriculture and engineering technique, this course fills a necessary place in adequately preparing men to meet these demands.

The curriculum is formulated requiring sufficient courses in the liberal arts, the foundation subjects of engineering and agriculture, and the specific agricultural engineering subjects, such as Farm Mechanics, Surveying and Drainage, Motors and Power Machinery, etc., all of which will equip the individual for any phase of this profession.

AGRICULTURAL ENGINEERING

Freshman Year

First Semester		*Second Semester*	
Eng. 15, Comp. and Am. Lit.	3 (3,0)	Eng. 16, Comp. and Am. Lit.	3 (3,0)
Drawing 13, Engr. Drawing	1⅓ (0,4)	Drawing 14, Engr. Drawing	1⅓ (0,4)
Math. 11, Trigonometry	5 (5,0)	Math. 12, Analytics	5 (5,0)
Chemistry 11, General	3⅔ (3,2)	Chemistry 12, General	3⅔ (3,2)
Shop	2 (0,6)	Shop	2 (0,6)
Agr. 11, Field Crops	3 (3,0)	Animal Husb. 12	3⅔ (3,2)
M. S. 11, Military Science	1 (0,3)	M. S. 12, Military Science	1 (0,3)
	19		19⅔

Sophomore Year

C. E. 23, Surveying	1⅔ (1,2)	Eng. 22, Lit. and Adv. Comp.	2 (2,0)
Eng. 21, Lit. and Adv. Comp.	2 (2,0)	Drawing 26, Elem. Des. and Kin.	⅔ (0,2)
Drawing 25, Mechanical	⅔ (0,2)	Physics 22, 24	5 (4,3)
Physics 21, 23	5 (4,3)	Agr. 22, Farm Machinery	2⅔ (2,2)
Agr. 23, Agr. Mechanics	3 (2,3)	Math. 22, Int. Calculus	5 (5,0)
Math. 21, Dif. Calculus	5 (5,0)	Agr. 20, Soils	2⅔ (2,2)
M. S. 21, Military Science	1 (0,3)	M. S. 22, Military Science	1 (0,3)
	18⅓		19

Junior Year

Agr. 31, Fert. & Manures	2 (2,0)	Ag. Ec. 22	3 (3,0)
Agr. 35, Motors & Pwr. Mch.	3 (2,3)	Botany 32, Forestry	2⅔ (2,2)
Dairy 21	3⅔ (3,2)	Horticulture 22	3⅔ (3,2)
Ag. Ec. 31	2⅔ (2,2)	Agr. 30, Forage Crops	2 (2,0)
E. E. Non-Tech.	2 (2,0)	M. S. 32, Military Science	⅔ (0,2)
Geol. 21, Geology	3 (3,0)	Electives	4-8
M. S. 31, Military Science	1 (0,3)		16-20
Electives	2⅔		
	20		
Suggested Electives:		**Suggested Electives:**	
Eng. 31, Public Speaking	2 (2,0)	Eng. 49, Agr. Journalism	2 (2,0)
A. H. 31, Feeds and Feeding	2⅔ (2,2)	Hort. 42, Com. Pomology	2⅔ (2,2)

Senior Year

C. E. 31, Mechanics	3	(3,0)
Agr. 55, A. E. Drainage and Terracing	3	(2,3)
E. and G. 41, Political Science	3	(3,0)
Agr. 61, A. E. Thesis	⅔	(0,2)
M. S. 41, Military Science	1	(0,3)
Agr. 43, Water Supply and Sanitation	3	(2,3)
Electives	4⅔-6⅓	
	18⅓-20	

Suggested Electives:

M. E. 23, Mach. Shop	1	(0,3)
M. E. 37,	3	(3,0)
Ag. Ec. 45, Farm Accounting	2⅔	(2,2)
Agr. 41, Cotton	2	(2,0)

A. H. 33, Livestock Management	2⅔	(2,2)
C. E. 32, Strength of Materials	3	(3,0)
Agr. 46, Farm Buildings	3	(2,3)
Agr. 48, Adv. Farm. Mch. Lab.	1	(0,3)
Agr. 62, A. E. Thesis	⅔	(0,2)
Eng. 32, Business Law	2	(2,0)
M. E. 38	3	(3,0)
M. S. 42, Military Science	⅔	(0.2)
Electives	2⅔-4	
	18⅔-20	

Suggested Electives:

M. E. 50, 5, Refrigeration	2	(2,0)
M. E. 24, Mach. Shop	1	(0,3)

SCHOOL OF CHEMISTRY

This course is intended to prepare the student to engage in manufacturing operations involving a knowledge of chemistry, for employment as chemist in commercial, fertilizer inspection, or food and feeding-stuff inspection laboratories; and for experiment station or U. S. Government service. A student who has satisfactorily completed this course will be well equipped in subject matter to teach elementary chemistry, and to pursue advanced work in chemistry. Students who desire to teach in the public schools should meet the professional requirements in Education in the state where employment is expected.

Beginning with the junior year enough elections are allowed to enable the student to fit himself for one of the above lines of work by pursuing the subject in the direction of chemical engineering, organic, physical, analytical or sanitary chemistry. The advances in all branches of chemistry have made specialization necessary, whether the student expects to enter any of the various lines of work open to a graduate of a thorough course in chemistry, or to pursue graduate work. For the latter group, two years of a modern language should be included in the electives chosen as this is a usual prerequisite for such graduate work at most universities.

CHEMISTRY

Freshman Year

First Semester

Chem. 11, General	3⅔	(3,2)
English 15, Comp. and Am. Lit.	3	(3,0)
*History 14, Am. Ec. Hist	2	(2,0)
Math. 11, Trigonometry	5	(5,0)
M. S. 11, Military Science	1	(0,3)
Physics 13, General	3⅔	
	18⅓	

Second Semester

Chem. 12, General	3⅔	(3,2)
English 16, Comp. and Am. Lit.	3	(3,0)
*E. and G. 12, Am. Gov't.	2	(2,0)
Math. 12, Analytics	5	(5,0)
M. S. 12, Military Science	1	(0,3)
Physics 14, General	3⅔	
	18⅓	

Sophomore Year

Chem. 23, Qualitative	4⅔	(2,8)	Chem. 24, Quantitative	4⅔	(2,8)
Chem. 25, Organic	3⅔	(3,2)	Chem. 26, Organic	3⅔	(3,2)
Drawing 13, Engr. Drawing	1⅓	(0,4)	Drawing 14, Engr. Drawing	1⅓	(0,4)
Eng. 21, Lit. and Adv. Comp.	2	(2,0)	Eng. 22, Lit. and Adv. Comp.	2	(2,0)
Math. 21, Dif. Calculus	5	(5,0)	Math. 22, Int. Calculus	5	(5,0)
M. S. 21, Military Science	1	(0,3)	M. S. 22, Military Science	1	(0,3)
	17⅔			17⅔	

Junior Year

Chem. 31, Physical	4⅓	(3,4)	Chem. 32, Physical	4⅓	(3,4)
Chem. 33, Quantitative	1⅓	(0,4)	Sociol. 31, Sociology	2	(2,0)
Chem. 35, Organic	2⅔	(2,2)	English 32, Business Law	2	(2,0)
E. and G. 21, Econ.	2	(2,0)	Geology 34, Mineralogy	2⅔	(2,2)
English 31, Pub. Speaking	2	(2,0)	M. S., 32, Military Science	⅔	(0,2)
Geology 33, Mineralogy	2⅔	(2,2)	Electives	4⅓-8⅓	
M. S. 31, Military Science	1	(0,3)			
Electives	0-4				
	16-20			16-20	

Senior Year

Chem. 45, History	2	(2,0)	Chem. 46, Stoich.	2	(2,0)
Chem. 43, Colloids	2	(2,0)	Chem. 44, Colloids	2	(2,0)
Chem. 41, Adv. Inorg.	2	(2,0)	Chem. 42, Adv. Inorg.	2	(2,0)
Chem. 47, Tech. Anal.	3	(1,6)	Chem. 50, Thesis	3	(0,9)
M. S. 41, Military Science	1	(0,3)	M. S. 42, Military Science	⅔	(0,2)
Electives	6-10		Electives	6⅓-10⅓	
	16-20			16-20	

*Language 3 hour option.

SCHOOL OF ENGINEERING

The courses in the School of Engineering are Architecture, Chemical Engineering, Civil Engineering, Electrical Engineering and Mechanical Engineering. For most students it is recommended that they take either as part of the free electives or as additional, some courses in the social sciences.

Outstanding students taking Civil, Electrical or Mechanical Engineering may arrange with the Dean of Engineering and the Dean of Vocational Education to take the full 18 hours required in Education for a high-school teacher in the state and at the same time get his degree in one of these courses.

Architecture

The information given below applies to the four-year course in Architecture as now given. In order to meet the modern trend the College is offering a five-year course in Architecture leading to the degree of Bachelor in Architecture. In this course the tech-

nical work of the lower classes is extended and elaborated, the fifth year design comprising a thesis in which the student selects his subject and writes the program to meet the approval of the faculty of Architecture. Work in Domestic Architecture, Specification Writing, Estimating, Chemistry, Surveying, Advanced History and allied subjects are included. A copy of the curriculum may be had upon request.

The course is a well-rounded cultural one, fitting the graduate not only for the practice of architecture, but for a number of allied professions. All work is individual and every effort is made to develop the student's individuality, imagination, and creative ability. Skillful draftsmanship and artistic presentation are insisted upon.

Architecture is one of the fine arts and much time is given to freehand drawing, color work, history of architecture, painting and sculpture. Architectural design, the principal subject, extends through four years. In this the student is given a written program of requirements for a building or group of buildings and under the criticism of the instructor works out a solution embodying his own ideas. Freehand drawing consists of sketching and rendering from casts, nature and life, in pencil, charcoal, pen and ink, crayons, water color and oils. This extends through four years. History of architecture, historic ornament and history of art are taught in the sophomore, junior, and senior years.

Strong courses are given in mathematics, graphic statics, strength of materials, reinforced concrete, building construction and in working drawings which consist of complete plans and specifications for a building prepared as in the office of a practicing architect.

The work in architecture occupies especially designed quarters on the top floor of Riggs Hall. One feature is a great drafting room with individual drafting tables. This is a marked advantage as all may study their problems in design and have the benefit of mutual help and criticism. Adjoining is a studio equipped with plaster casts and models suitable for the needs in free-hand drawing and color work and with controlled lighting. Class rooms are equipped with lanterns and slides.

A working library adjoining the drafting rooms contains many volumes covering architecture and allied subjects, photographs, plans and illustrations, lantern slides, drawings, models, and files of the leading architectural magazines, both American and foreign. This is in addition to the main college library. In the structural drafting room is a complete built-in exhibit of building materials and appliances especially arranged for instructional purposes.

Each spring students are expected to take an educational trip to a large city to study examples of architecture and construction.

Six weeks of practical architectural work approved by the architectural faculty is required for graduation. (Arch. 28.)

ARCHITECTURE

Freshman Year

First Semester		*Second Semester*	
Arch. 11, Elems. of Arch. ____1⅔	(0,5)	Arch. 12, Arch. Design _____1⅔	(0,5)
Arch. 13, Freehand Drawing __1⅓	(0,4)	Arch. 14, Freehand Drawing __1⅓	(0,4)
Arch. 15, Descrip. Geom. _____ ⅔	(0,2)	Arch. 16, Sh. Shad. & Persp. __ ⅔	(0,2)
English 15, Comp. and Am. Lit. 3	(3,0)	English 16, Comp. and Am. Lit. _____3	(3,0)
*French 11 _____3	(3,0)	*French 12 _____3	(3,0)
*Hist. 31, Hist. of Civilization_3	(3,0)	*Hist. 32, Hist. of Civilization_3	(3,0)
Math. 11, Trigonometry _____5	(5,0)	Math. 12, Analytics _____5	(5,0)
Physics 11, General _____3⅔	(3,2)	Physics 12, General _____3⅔	(3,2)
M. S. 11, Military Science ____1	(0,3)	M. S. 12, Military Science ____1	(0,3)
	19⅓		19⅓

Sophomore Year

Arch. 21, Arch. Design _____4⅔	(0,14)	Arch. 22, Arch. Design _____4⅔	(0,14)
Arch. 23, Antique and Color __1	(0,3)	Arch. 24, Antique and Color __1	(0,3)
Arch. 25, Hist. of Arch. _____4	(4,0)	Arch. 26, Hist. of Arch. _____4	(4,0)
*French 21 _____3	(3,0)	*French 22 _____3	(3,0)
*Chem. 11, Gen. Chem. _____3⅔	(3,2)	*Chem. 12, Gen. Chem. _____3⅔	(3,2)
English 21, Lit. and Adv. Comp. _____2	(2,0)	English 22, Lit. and Adv. Comp. _____2	(2,0)
Math. 23, Dif. Calculus _____3	(3,0)	Math. 24, Int. Calculus _____3	(3,0)
M. S. 21, Military Science _____1	(0,3)	M. S. 22, Military Science ____1	(0,3)
	18⅔ or 19⅓		18⅔ or 19⅓

Junior Year

Arch. 31, Arch. Design _____7⅓	(0,22)	Arch. 32, Arch. Design _____7⅓	(0,22)
Arch. 33, Sketching & Painting 1	(0,3)	Arch. 34, Sketching & Painting 1	(0,3)
Arch. 35, Bldg. Constr. _____3	(3,0)	Arch. 36, Bldg. Constr. _____2	(2,0)
Arch. 37, Working Drawings __ ⅔	(0,2)	Arch. 38, Working Drawings __ ⅔	(0,2)
Arch. 39, Historic Ornament __ ⅔	(0,2)	C. E. 32, Strength of Materials_3	(3,0)
*C. E. 31, Mechanics _____3	(3,0)	C. E. 34, Graphic Statics _____1⅔	(1,2)
English. 31, Public Speaking __2	(2,0)	English 32, Business Law ____2	(2,0)
M. S. 31, Military Science _____1	(0,3)	M. S. 32, Military Science ____ ⅔	(0,2)
Elective _____2	(2,0)	Elective _____3	(3,0)
	20⅔		21⅓

*French 11, 12, 21 and 22 or History 31, 32 and Chemistry 11, 12.

Senior Year

Arch. 41, Arch. Design	6⅔	(0,20)	Arch. 42, Arch. Design	6⅔	(0,20)
Arch. 43, Bldg. Const.	3	(3,0)	Arch. 44, Bldg. Const.	3	(3,0)
Arch. 45, Struct. Design	2	(0,6)	Arch. 46, Struct. Design	2⅔	(0,8)
Arch. 47, Mech. Plant	2	(2,0)	Arch. 48, Profess. Prac.	1	(1,0)
Arch. 49, Life Drawing	⅔	(0,2)	Arch. 40, Life Drawing	⅔	(0,2)
C. E. 47, Reinforced Conc.	2	(2,0)	Arch. 40.5, Hist. of Art	2	(2,0)
*E. and G. 21, Economics	2	(2,0)	Sociol. 31, Sociology	2	(2,0)
M. S. 41, Military Science	1	(0,3)	M. S. 42, Military Science	⅔	(0,2)
Elective	2	(2,0)	Elective	3	(3,0)
	21⅓			21⅔	

*Offered both semesters.

CHEMICAL ENGINEERING

This course combines a well-rounded course in Chemistry with fundamental courses in Physics, Mechanics, and engineering subjects with a view of training men for work in the chemical industries or industries in which considerable chemical engineering processes are used. Competition is compelling the industries to abandon rule-of-thumb methods. They are using more and more men trained in the principles of Chemical Engineering to design their plants and to supervise the operation of the various processes.

The Chemical engineer looks out for the engineering problems arising in connection with the chemical industry or chemical processes. He is interested in the economic production as well as turning out a good product, and naturally is interested in finding out where losses occur, in developing use for by-products, and in recovering and utilizing waste products. It is hardly possible in a four-year course to cover well this field both in Chemistry and Engineering, and it is strongly recommended that those desiring rapid advancement to responsible positions take an additional year in Chemical Engineering.

Graduates in Chemical Engineering are qualified for employment as chemists in manufacturing plants; as chemists in industrial research; as gas plant chemists and superintendents; sanitary and municipal engineers; manufacturers of chemicals, and as promoters of the chemical industry in the South.

CHEMICAL ENGINEERING

Freshman Year

First Semester			*Second Semester*		
Chemistry 11, General	3⅔	(3,2)	Chemistry 12, General	3⅔	(3,2)
Drawing 13, Engr. Drawing	1⅓	(0,4)	Drawing 14, Engr. Drawing	1⅓	(0,4)
English 15, Comp. and Amer. Lit.	3	(3,0)	English 16, Comp. and Amer. Lit.	3	(3,0)
*History 14, Amer. Ec. Hist.	2	(2,0)	*E. and G. 12, Amer. Gov't. and Polit. Parties	2	(2,0)
Math 11, Trigonometry	5	(5,0)	Math. 12, Analytics	5	(5,0)
M. E. 11 or M. E. 12 & 14	2	(0,6)	M. E. 12 and 14 or M. E. 17, Shop	2	(0,6)
M. S. 11, Military Science	1	(0,3)	M. S. 12, Military Science	1	(0,3)
	18			18	

*Modern Language 3 Hr. Option.

Sophomore Year

Chem. 23, Qualitative	4⅔	(2,8)	Chem. 24, Quantitative	4⅔	(2,8)
Drawing 25, Mechanical	⅔	(0,2)	Drawing 26, Elem. Des. and Kin.	⅔	(0,2)
English 21, Lit. and Adv. Comp.	2	(2,0)	English 22, Lit. and Adv. Comp.	2	(2,0)
Math. 21, Dif. Calculus	5	(5,0)	Math. 22, Int. Calcul.	5	(5,0)
Physics 21 and 23, General	5	(4,3)	Physics 22 and 24, General	5	(4,3)
M. S. 21, Military Science	1	(0,3)	M. S. 22, Military Science	1	(0,3)
	18⅓			18⅓	

Junior Year

Chem. 25, Organic	3⅔	(3,2)	Chem. 26, Organic	3⅔	(3,2)
Chem. 33, Quantitative	1⅓	(0,4)	Drawing 32, Mach. Des.	1	(0,3)
Drawing 31, Kin. & Mach. Design	1	(0,3)	English 32, Bus. Law	2	(2,0)
English 31, Public Speaking	2	(2,0)	M. E. 24, Mach. Shop	1	(0,3)
E. and G. 21, Economics	2	(2,0)	M. E. 31, Mechanics	3	(3,0)
M. E. 23, Mach. Shop	1	(0,3)	M. E. 33 & 33a, Mech. Engr.	3⅔	(3,2)
M. E. 31, Mechanics	3	(3,0)	M. S. 32, Military Science	⅔	(0,2)
M. E. 35, Thermodynamics	3	(3,0)	Elective	3	
M. S. 31, Military Science	1	(0,3)			
Elective	2	(2,0)			
	20			18	

Senior Year

Chem. 35, Organic	2⅔	(2,2)	Chem. 46, Physical	4⅓	(3,4)
Chem. 45, Physical	4⅓	(3,4)	Chem. 54, Industrial	2	(2,0)
Chem. 53, Industrial	2	(2,0)	Geol. 34, Mineralogy	2⅔	(2,2)
Geol. 33, Mineralogy	2⅔	(2,2)	E. E. 52, Elem. of Elec. Engr.	2⅔	(3,2)
M. E. 49, Mech. of Matr.	3	(3,0)	M. S. 42, Military Science	⅔	(0,2)
M. S. 41, Military Science	1	(0,3)	Elective	5	
Elective	4				
	19⅔			17⅓	

CIVIL ENGINEERING

This course is intended to prepare young men for entrance upon professional practice in some of the many branches of civil engineering, and also to meet the needs of those who, having been engaged in engineering work without a course of instruction, de-

sire to equip themselves for more successful competition with those who have had such instruction.

In connection with the technical studies, liberal training is given in English, history, economics, pure mathematics, and the physical sciences. The course will also be found to embrace a considerable amount of drawing, shop work, and short courses in electrical engineering and mechanical engineering.

The distinctive work pursued by students in this course includes the field and office work of surveying and leveling; topographic surveying and drafting; the location and construction of railroads and highways, bridges, and other structures in connection therewith; involving investigation as to the strength of the materials of construction and the theories involved in the use thereof; masonry construction; foundations on land and under water; a particular study of highway engineering, including a laboratory course covering all the standard tests of highway material, both bituminous and non-bituminous; municipal and sanitary engineering, including bacteriology, water-supply, sewerage and drainage; and a brief study of engineering law including contracts and specifications. Actual design, as well as analytic investigation, is given in all cases.

A summer surveying camp of two weeks duration is held between the sophomore and junior years.

CIVIL ENGINEERING

Freshman Year

First Semester		*Second Semester*	
Chemistry 11, General ____ 3⅔	(3,2)	Chemistry 12, General ____ 3⅔	(3,2)
Drawing 13, Engr. Drawing ___ 1⅓	(0,4)	Drawing 14, Engr. Drawing ___ 1⅓	(0,4)
English 15, Comp. and Amer. Lit. ____ 3	(3,0)	English 16, Comp. and Amer. Lit. ____ 3	(3,0)
*History 14, Amer. Ec. Hist. ___ 2	(2,0)	*E. and G. 12, Amer. Gov't. and Polit. Parties ____ 2	(2,0)
Math 11, Trigonometry ____ 5	(5,0)	Math. 12, Analytics ____ 5	(5,0)
M. E. 17 or M. E. 12 & 14 Shop 2	(0,6)	M. E. 12 and 14 or M. E. 17, Shop ____ 2	(0,6)
M. S. 11, Military Science ____ 1	(0,3)	M. S. 12, Military Science ____ 1	(0,3)
18		18	

*Modern Language 3 Hr. Option.

Sophomore Year

C. E. 21 Surveying	3⅓	(2,4)	C. E. 22, Surveying	3⅔	(3,2)
Drawing 25, Mechanical	⅔	(0,2)	Drawing 28, Structural	⅔	(0,2)
English 21, Lit. and Adv. Comp.	2	(2,0)	English 22, Lit. and Adv. Comp.	2	(2,0)
Math. 21, Dif. Calculus	5	(5,0)	Math. 22, Int. Calculus	5	(5,0)
M. S. 21, Military Science	1	(0,3)	M. S. 22, Military Science	1	(0,3)
Physics 21, 23, General	5	(4,3)	Physics 22, 24, General	5	(4,3)
*Elective	2	(2,0)	*Elective	2	(2,0)
	19			19⅓	

C. E. 30—Summer Surveying Camp. Two weeks, 3 credits
*Suggest consultation with head of Department

Junior Year

C. E. 31, Mechanics	3	(3,0)	C. E. 32, Mech. of Matr.	3	(3,0)
C. E. 35, Route Surveying	3	(3,0)	C. E. 34, Graphic Statics	1⅔	(1,2)
C. E. 37, Structural Probs.	1⅓	(0,4)	C. E. 36, Roads & Pavements	4	(3,3)
English 31, Pub. Speaking	2	(2,0)	C. E. 38, Struc. Problems	2	(0,6)
M. E. 33, Mech. Engr.	3	(3,0)	E. E. 36, Elements of E. E.	3⅔	(3,2)
M. E. 33a, Lab.	⅔	(0,2)	M. S. 32, Military Science	⅔	(0,2)
M. S. 31, Military Science	1	(0,3)	Elective	3	
Physics 33, Astronomy	2	(2,0)			
Elective	2				
	18			18	

Senior Year

C. E. 41, Struct. Design	3	(2,3)	Bact. 42, Sanitary	3	(2,3)
C. E. 43, Road Mat. and Test.	1	(0,3)	English, 32, Bus. Law	2	(2,0)
C. E. 45, Reinf. Concrete	3	(2,3)	C. E. 42, Bridge Des.	4	(2,6)
C. E. 49, Hydraulics	3	(3,0)	C. E. 44, Road M. T. Lab.	1	(0,3)
E. and G. 21, Economics	2	(2,0)	C. E. 46, Mun. and San. Engr.	5	(5,0)
Geology 43, Engr. Geology	2	(2,0)	M. S. 42, Military Science	⅔	(0,2)
M. E. 42a, Hydro. & Mat. Lab.	⅔	(0,2)	Elective	3	
M. S. 41, Military Science	1	(0,3)			
Elective	2				
	17⅔			18⅔	

ELECTRICAL ENGINEERING

The field of electrical engineering embraces the generation, transmission, and utilization of electrical energy for domestic and industrial purposes. It also includes: illumination; transportation; communication; and, the design, manufacture and sale of electrical machines and devices.

This course contains a selected series of studies which enable the student to enter any division of the field of electrical engineering.

The first two years are devoted largely to sciences and other subjects prerequisite to the general field of engineering. The last two years are more specialized and embrace those technical courses which are pertinent to electrical engineering.

The theory courses in science and engineering are paralleled and reinforced by strong laboratory courses through which the student may make his own determinations of the characteristics of engineering materials and machines. The laboratories are well equipped for this work.

The entire course is directed toward the development of initiative and self reliance, so that the student may enter his chosen field with reasonable hope of success and usefulness.

ELECTRICAL ENGINEERING

Freshman Year

First Semester		*Second Semester*	
Chemistry 11, General ____ 3⅔	(3,2)	Chemistry 12, General ____ 3⅔	(3,2)
Drawing 13, Engr. Drawing ___ 1⅓	(0,4)	Drawing 14, Engr. Drawing ___ 1⅓	(0,4)
English 15, Comp. and Amer. Lit. ____ 3	(3,0)	English 16, Comp. and Amer. Lit. ____ 3	(3,0)
*History 14, Amer. Ec. Hist. ___ 2	(2,0)	E. and G. 12, Amer. Gov't. and Polit. Parties ____ 2	(2,0)
Math 11, Trigonometry ____ 5	(5,0)	Math. 12, Analytics ____ 5	(5,0)
M. E. 17 or M. E. 12 & 14 Shop 2	(0,6)	M. E. 12 and 14 or M. E. 17, Shop ____ 2	(0,6)
M. S. 11, Military Science ____ 1	(0,3)	M. S. 12, Military Science ____ 1	(0,3)
18		18	

*Modern Language 3 Hr. Option.

Sophomore Year

Drawing 25, Mechanical ____ ⅔	(0,2)	Drawing 26, Elem. Des. & Kin. ⅔	(0,2)
C. E. 23, Sur. (or E. and G. 21) 1⅔	(1,2)	E. and G. 21, Econ. or C. E. 23 2	(2,0)
English 21, Lit. and Adv. Comp. ____ 2	(2,0)	English 22, Lit. and Adv. Comp. ____ 2	(2,0)
Math. 21, Dif. Calculus ____ 5	(5,0)	Math. 22, Int. Calculus ____ 5	(5,0)
M. E. 23, Mach. Shop ____ 1	(0,3)	M. E. 24, Mach. Shop ____ 1	(0,3)
M. S. 21, Military Science ____ 1	(0,3)	M. S. 22, Military Science ____ 1	(0,3)
Physics 21 and 23, General ____ 5	(4,3)	Physics 22 and 24, General ___ 5	(4,3)
Elective ____ 2		Elective ____ 2	
18⅓		18⅔	

Junior Year

Drawing 31, Kin. & Mach. Design ____ 1	(0,3)	Drawing 32, Mach. Des. ____ 1	(0,3)
E. E. 31, D. C. Machinery ____ 5	(5,0)	E. E. 32, A. C. Circuits ____ 5	(5,0)
E. E. 31a, Elec. Measurement _1	(0,3)	E. E. 32a, Elec. Lab. ____ 1⅓	(0,4)
Eng. 31, Public Speaking ____ 2	(2,0)	M. E. 32, Mechanics ____ 3	(3,0)
M. E. 31, Mechanics ____ 3	(3,0)	M. E. 36, Mech. Engr. ____ 3	(3,0)
M. E. 35, Thermodynamics ____ 3	(3,0)	M. E. 36a, Mech. Lab. ____ 1	(0,3)
M. S. 31, Military Science ____ 1	(0,3)	M. S. 32, Military Science ____ ⅔	(0,2)
Elective ____ 2		Elective ____ 3	
18		18	

Senior Year

E. E. 41, A. C. Mach.	5	(5,0)	E. E. 42, Elec. Engr.	3	(3,0)
E. E. 41a, Elec. Lab.	2	(1,3)	E. E. 42a, Elec. Lab.	2	(1,3)
E. E. 45, Elec. Design	1	(0,3)	E. E. 44, Power Trans.	3	(3,0)
M. E. 41, Mech. Engr.	2	(2,0)	E. E. 46, Elec. Design	1	(0,3)
M. E. 41a, Mech. Lab.	1	(0,3)	English 32, Business Law	2	(2,0)
M. E. 49, Mech. of Materials	3	(3,0)	M. E. 42.5, Hydraulics	2	(2,0)
M. S. 41, Military Science	1	(0,3)	M. S. 42, Military Science	⅔	(0,2
*Elective	4		*Elective	5	
	19			18⅔	

*Two electives each semester to be approved by Head of Department.

MECHANICAL ENGINEERING

The course in mechanical engineering is designed to give the graduate as broad a training as possible and to fit him for some specific type of work.

It embraces practically all forms of engineering which have for their objects the application of the forces of nature to the accomplishment of the processes of industry. The course is designed to give an intimate knowledge of the materials used in engineering, the laws of mechanics and the characteristics of various types of machinery.

The shop courses embrace wood work, forge work, foundry and machine work. The purpose of this instruction is not to turn out skilled workmen but to train those faculties of mind which can best be reached through the work of the hand, and to give the student a clear knowledge of the characteristics and possibilities of the materials used in engineering.

Considerable time is given to the study of the laws of the physical sciences, in such subjects as physics, chemistry, mechanics, electricity and magnetism and thermodynamics.

During the fourth year stress is laid on the application of the fundamental principles already covered so that the graduate may be able to design or manage those types of machines which ordinarily come under the supervision of the mechanical engineer.

The mechanical engineer should have a liberal education; therefore, in addition to the regular technical work, training is given in English, history, economics, civics and related subjects.

MECHANICAL ENGINEERING

Freshman Year

First Semester

Chemistry 11, General	3⅔	(3,2)
Drawing 13, Engr. Drawing	1⅓	(0,4)
English 15, Comp. and Amer. Lit.	3	(3,0)
*History 14, Amer. Ec. Hist.	2	(2,0)
Math 11, Trigonometry	5	(5,0)
M. E. 17 or M. E. 12 & 14 Shop	2	(0,6)
M. S. 11, Military Science	1	(0,3)
	18	

Second Semester

Chemistry 12, General	3⅔	(3,2)
Drawing 14, Engr. Drawing	1⅓	(0,4)
English 16, Comp. and Amer. Lit.	3	(3,0)
*E. and G. 12, Amer. Gov't. and Polit. Parties	2	(2,0)
Math. 12, Analytics	5	(5,0)
M. E. 12 and 14 or M. E. 17, Shop	2	(0,6)
M. S. 12, Military Science	1	(0,3)
	18	

*Modern Language 3 Hr. Option.

Sophomore Year

Drawing 25, Mechanical	⅔	(0,2)
C. E. 23, Sur. (or E. and G. 21)	1⅔	(1,2)
English 21, Lit. and Adv. Comp.	2	(2,0)
Math. 21, Dif. Calculus	5	(5,0)
M. E. 23, Mach. Shop	1	(0,3)
M. S. 21, Military Science	1	(0,3)
Physics 21 and 23, General	5	(4,3)
Elective	2	
	18⅓	

Drawing 26, Elem. Des. and Kin.	⅔	(0,2)
E. and G. 21, Econ. or C. E.	2	(2,0)
English 22, Lit. and Adv. Comp.	2	(2,0)
Math. 22, Int. Calculus	5	(5,0)
M. E. 24, Mach. Shop	1	(0,3)
M. S. 22, Military Science	1	(0,3)
Physics 22 and 24, General	5	(4,3)
Elective	2	
	18⅔	

Junior Year

Drawing 31	1	(0,3)
E. E. 33, D. C. Machinery	4	(4,0)
E. E. 33a, Elec. Measurements	1	(0,3)
English 31, Public Speaking	2	(2,0)
M. E. 31, Mechanics	3	(3,0)
M. E. 35, Thermodynamics	3	(3,0)
M. E. 35a, Mech. Lab.	1	(0,3)
M. S. 31, Military Science	1	(0,3)
Elective	2	
	18	

Drawing 32	1	(0,3)
E. E. 34, A. C. Circuits	4	(4,0)
E. E. 34a, Elec. Lab.	1	(0,3)
M. E. 38, Ind. Engr.	2	(2,0)
M. E. 32, Mechanics	3	(3,0)
M. E. 36, Mech. Engr.	3	(3,0)
M. E. 36a, Mech. Lab.	1	(0,3)
M. S. 32, Military Science	⅔	(0,2)
Elective	3	
	18⅔	

Senior Year

E. E. 43, A. C. Machinery	3	(3,0)
E. E. 43a, Elec. Lab.	1	(0,3)
M. E. 43, Power Plants	3	(3,0)
M. E. 43a, Mech. Lab.	1⅓	(0,4)
*M. E. 45, Gas. Engines	2	(2,0)
*M. E. 45a, Design	1	(0,3)
M. E. 49, Mechan. of Materials	3	(3,0)
M. S. 41, Military Science	1	(0,3)
Elective	2	
	17⅓	
*M. E. 47, Heat and Vent.	2	(2,0)
*M. E. 47a, Design.	1	(0,3)

English 32, Business Law	2	(2,0)
M. E. 42, Hydraulics	3	(3,0)
M. E. 42a, Mech. Lab.	⅔	(0,2)
M. E. 44, Power Plants	3	(3,0)
M. E. 44a Lab.	1⅓	(0,4)
*M. E. 46, Steam Turbines	2	(2,0)
*M. E. 46a, Design.	1	(0,3)
M. S. 42, Military Science	⅔	(0,2)
**Elective	5	
	18⅔	
*M. E. 48, Heat and Vent.	2	(2,0)
*M. E. 48a, Design.	1	(0,3)

*M. E. 47, 47a, 48, 48a are optional i n place of M. E. 45, 45a, 46, 46a.
**Two electives must be approved by head of Department.

SCHOOL OF GENERAL SCIENCE

The four-year course in the School of General Science is planned to meet the needs of students desiring general training in the sciences. It is recommended for men preparing for the professions and is also available for capable students who, after trial, find themselves unsuited for the technical and vocational courses.

Pre-Medical Course

Students preparing for the study of medicine are advised to complete four years of undergraduate work before entering medical school. Clemson College, however, will award the degree of Bachelor of Science in General Science to a student who, after completing the first three years of the General Science course, is graduated from a medical college approved by the American Medical Association, provided that while at Clemson he chose only approved electives and passed Chemistry 25 and 26 and Economics 21 in his sophomore year and Sociology 31 in his junior year. Before choosing electives the student should consult the medical college of his choice in regard to specific requirements.

Pre-Professional Course

To meet the needs of students preparing for the professions other than medicine, Clemson College will award the degree of Bachelor of Science in General Science to a student who, after completing a modified form of the first three years of the General Science course, is graduated from a professional school of good standing, approved by a committee of the faculty of the School of General Science. Students registering under this provision must in the junior year include Economics 21 and Sociology 31 and must confine their electives to the approved groups.

GENERAL SCIENCE

Freshman Year

First Semester			*Second Semester*		
English 15, Comp. and Am. Lit.	3	(3,0)	English 16, Comp. and Am. Lit.	3	(3,0)
History 14, Am. Econ. History	2	(2,0)	E. and G. 12, American Gov't.	2	(2,0)
Botany 11, General	3⅓	(2,4)	Z. and E. 12, Gen. Zoology	3⅓	(2,4)
Chemistry 11, General	3⅔	(3,2)	Chemistry 12, General	3⅔	(3,2)
M. S. 11, Military Science	1	(0,3)	M. S. 12, Military Science	1	(0,3)
Modern Language	3	(3,0)	Modern Language	3	(3,0)
Math. 17	3	(3,0)	Math. 18	3	(3,0)
	19			19	

Sophomore Year

English 21, Lit. and Adv. Comp.	2	(2,0)	English 22, Lit. and Adv. Comp.	2	(2,0)
Physics 13, General	3⅔	(3,2)	Physics 14, General	3⅔	(3,2)
M. S. 21, Military Science	1	(0,3)	M. S. 22, Military Science	1	(0,3)
Modern Language (Continued)	3	(3,0)	Modern Language (Continued)	3	(3,0)
Geology 23 or Natural Science	3	(3,0)	Nat. Science or Approved Elect.	3	(3,0)
Math. 21 or Approved Elective	5	(5,0)	Math. 22 or Approved Elective	5	(5,0)
	17⅔-20			17⅔-20	

Junior Year

English 31, Public Speaking	2	(2,0)	English 32, Business Law	2	(2,0)
Psychol. 35, Psychology	3	(2,2)	Psychol. 36, Psychology	3	(2,2)
History 31, Hist. of Civiliz.	3	(3,0)	History 32, Hist. of Civiliz.	3	(3,0)
M. S. 31, Military Science	1	(0,3)	M. S. 32, Military Science	⅔	(0,2)
Approved elective	6-8		Approved elective	6-8	
Free Elective	3		Free elective	3⅓	
	18-20			18-20	

Senior Year

*E. and G. 21, Economics	2	(2,0)	Sociol. 31, Sociology	2	(2,0)
M. S. 41, Military Science	1	(0,3)	M. S. 42, Military Science	⅔	(0,2)
Approved elective	10-11⅓		Approved elective	10-12	
Free elective	5		Free elective	5⅓	
English 50, Thesis	⅔	(0,2)			
	18⅔-20			18-20	

*Offered both semesters.

Approved Electives. All courses offered by the following departments: Agricultural economics, botany and bacteriology, chemistry, economics and government, sociology and psychology, English, geology and mineralogy, history, mathematics, modern language, physics, religion, vocational education, and zoology and entomology. Courses in the following subjects are also approved electives: Art appreciation, genetics, history of architecture, and history of art.

Additional Requirements

For graduation in this course at least the second year of one foreign language must be completed in college.

Of the minimum of forty-eight semester credit hours of approved electives at least eight hours, exclusive of required courses, must be completed in one of the following: Chemistry, mathematics, or physics; and at least eight hours, exclusive of required courses must be completed in one of the following: Economics and government and history, sociology and psychology, English, or modern language.

SCHOOL OF TEXTILES

The growth of the textile industry in the South has been phenomenal, and it offers many opportunities to young men for advancement to excellent positions of responsibility. At the same time there has more recently developed a very heavy demand for men specially trained in the different branches of the textile industry, namely textile engineering, textile chemistry and dyeing, and weaving and designing. With increased competition, prices become lower and a higher quality of work is necessary in order to get the business. Increasing labor and material costs require greater economies and new and shorter processes. These results are possible through the cooperation of a competent technical staff.

The textile course in its entirety (see courses outlined below) has been developed to meet this demand for well-trained men to fill these positions. It has been cooperatively developed by many men who have spent years in the textile industry, right out in the mills, on the front line, studying these very problems and processes, and who are familiar with the type of training necessary for this work. The course has not been developed from the purely theoretical or academic standpoint.

Throughout the four years practical work with regular textile equipment in the college plant supplements the theory taught. This is done with a view to tying together theory and practice and to developing in the student habits of accurate observation and some skill in manipulation of the machines involved. In this work special consideration is given to economy of time, precision of results, and attention to details, as well as to methods of fundamental importance.

These courses so equip the graduate that he may confidently look forward to a successful career provided he supplements his training with the necessary energy, application, and tact.

Students in the School of Textiles are encouraged to work in the industry during their vacation periods in order to get the practical mill experience which is necessary for advancement in the industry. This practical experience better enables the student to understand the theory underlying these manufacturing practices.

TEXTILE ENGINEERING

The course in textile engineering is designed to give the student sound training, both theoretical and practical, in the sciences upon which manufacturing processes are based. It is a well-rounded course in that the strictly textile subjects are supplemented by related fundamental engineering subjects as well as by subjects of general educational value. (See School of Textiles for complete write-up).

TEXTILE ENGINEERING

Freshman Year

First Semester			*Second Semester*		
Chemistry 11, General	3⅔	(3,2)	Chemistry 12, General	3⅔	(3,2)
Drawing 13, Engineering	1⅓	(0,4)	Drawing 14, Engineering	1⅓	(0,4)
English 15, Comp. & Am. Lit.	3	(3,0)	English 16, Comp. & Am. Lit.	3	(3,0)
History 14, Am. Ec. Hist.	2	(2,0)	E. and G. 12, Am. Gov't and Pol. Parties	2	(2,0)
Math. 11, Trigonometry	5	(5,0)	Math. 12, Analytics	5	(5,0)
M. E. 17, Woodwork	⅔	(0,2)	M. S. 12, Military Science	1	(0,3)
M. S. 11, Military Science	1	(0,3)	*W. D. 12, Textiles	1⅔	(1,2)
*Y. M. 11, Textiles	1⅔	(1,2)			
	18⅓			17⅔	

*Offered both semesters.

Sophomore Year

Drawing 25, Mechanical	⅔	(0,2)	Drawing 28, Mechanical	⅔	(0,2)
English 21, Lit. & Adv. Comp.	2	(2,0)	English 22, Lit. & Adv. Comp.	2	(2,0)
Math. 23, Dif. Calculus	3	(3,0)	*W. D. 26, Mill Problems	3	(3,0)
M. E. 23, Machine Shop	1	(0,3)	M. E. 24, Machine Shop	1	(0,3)
M. S. 21, Military Science	1	(0,3)	M. S. 22, Military Science	1	(0,3)
Physics 11, General	3⅔	(3,2)	Physics 12, General	3⅔	(3,2)
W. D. 21, Elementary Design	2	(2,0)	W. D. 22, Adv. Design	2	(2,0)
W. D. 23, Weaving	⅔	(0,2)	W. D. 24, Weaving	1	(0,3)
Y. M. 21, Pickers	2⅔	(2,2)	Y. M. 22, Cards & Drawing Frames	2⅔	(2,2)
*Y. M. 23, Mill Problems	2	(2,0)	*Y. M. 28, Cotton Grading	⅔	(0,2)
	18⅔			17⅔	

Junior Year

†M. E. 31, Mechanics	3	(3,0)	Eng. 32, Bus. Law	2	(2,0)
E. E. 35, Elec. Eng.	2⅔	(2,2)	M. E. 38, Mech. Engin.	3	(3,0)
M. S. 31, Military Science	1	(0,3)	M. E. 38.5, Mech. Engin. Lab.	⅔	(0,2)
T. Chem. 31, Tex. Chem.	2⅔	(2,2)	M. S. 32, Military Science	⅔	(0,2)
W. D. 31, Design	2	(2,0)	T. Chem. 32, Tex. Chem.	2⅔	(2,2)
W. D. 33, Fabric Analysis	1	(0,2)	T. Chem. 46.5, Microscopy	1⅓	(1,1)
W. D. 35, Weaving	1⅔	(1,2)	W. D. 34, Fabric Analysis	1	(0,2)
Y. M. 31, Roving Frames	2⅔	(2,2)	W. D. 36, Weaving	⅔	(0,2)
Electives	3		Y. M. 41, Spinning	3	(2,3)
			Electives	3⅔	
	19⅔			18⅔	

†Repeated second semester; approved option may be taken first semester.
*Offered both semesters.

Senior Year

E. and G. 21, Econ.	2	(2,0)	
Eng. 31, Public Speaking	2	(2,0)	
M. S. 41, Military Science	1	(0,3)	
T. Chem. 41, Dyeing	2⅔	(2,2)	
W. D. 41, Jac. Weaving	1⅔	(1,2)	
W. D. 43, Cost Finding	3	(3,0)	
W. D. 45, Pattern Weaving	⅔	(0,2)	
Y. M. 32, Doubling & Draft.	1⅔	(1,2)	
Y. M. 50, Thesis	1	(0,2)	
Electives	2⅔		
	18⅓		

Sociol. 31, Sociology	2	(2,0)	
M. S. 42, Military Science	⅔	(0,2)	
T. Chem. 42, Dyeing	2⅔	(2,2)	
W. D. 44, Warp Preparation	2	(2,0)	
W. D. 46, Weaving	⅔	(0,2)	
W. D. 48, Knitting	⅔	(0,2)	
Y. M. 42, Combers	1⅔	(1,2)	
Y. M. 44, Mill Econ.	2	(2,0)	
W. D. 50, Thesis	1	(0,2)	
Electives	4⅔		
	18		

TEXTILE CHEMISTRY AND DYEING

The many new chemical processes now available for use in the bleaching, dyeing and finishing of textiles are largely responsible for the present demand for chemists in the textile industry. Such processes when properly executed give new, novel and desirable results; they require, however, the careful supervision of technically trained men.

This four-year course has been planned to give a thorough training in the fundamental theories of chemistry and dyeing with special emphasis on the application of these theories to the practical accomplishments of the textile industry. (See School of Textiles for complete write-up).

TEXTILE CHEMISTRY AND DYEING

Freshman Year

(Same as Textile Engineering. See Page 77)

Sophomore Year

First Semester

Chem. 23, Qualitative	4⅔	(2,8)
Eng. 21, Lit. and Adv. Comp.	2	(2,0)
Math. 23, Diff. Calculus	3	(3,0)
Physics 13, General	3⅔	(3,2)
W. D. 21, Elem. Design.	2	(2,0)
W. D. 23, Weaving	⅔	(0,2)
M. S. 21, Military Science	1	(0,3)
*Y. M. 28, Cotton Grading	⅔	(0,2)
	17⅔	

Second Semester

Chem. 24, Quantitative	4⅔	(2,8)
Eng. 22, Lit. and Adv. Comp.	2	(2,0)
Math. 24, Int. Calculus	3	(3,0)
Physics 14, General	3⅔	(3,2)
W. D. 22, Adv. Design.	2	(2,0)
W. D. 24, Weaving	1	(0,3)
M. S. 22, Military Science	1	(0,3)
	17⅓	

*Offered both semesters.

Junior Year

Chem. 31, Physical	3	(3,0)	Chem. 32, Physical	3	(3,0)
E. and G. 21, Economics	2	(2,0)	Sociol. 31, Sociology	2	(2,0)
Eng. 31, Pub. Speaking	2	(2,0)	Eng. 32, Business Law	2	(2,0)
T. C. 35, Textile Chemistry	5	(4,3)	T. C. 38, Textile Chemistry	5	(4,3)
T. C. 47, Microscopy	1⅓	(1,1)	Chem. 33, Adv. Quantitative	1⅓	(0,4)
M. S. 31, Military Science	1	(0,3)	M. S. 32, Military Science	⅔	(0,2)
Electives	4⅔		Chem. 46, Stoichiometry	2	(2,0)
			Electives	3	
	19			19	

Senior Year

T. C. 41.5, Dyeing	5⅓	(4,4)	T. C. 42.5, Dyeing	5⅓	(4,4)
T. C. 43, Cellulose	2	(2,0)	T. C. 48, Synthetic Fibers	2	(2,0)
T. C. 45, Textile Anal.	2	(1,3)	T. C. 46, Textile Anal.	2	(1,3)
Chem. 43, Colloids	2	(2,0)	Chem. 44, Colloids	2	(2,0)
T. C. 33, Tech. Writing	1	(1,0)	T. C. 34, Tech. Writing	1	(1,0)
M. S. 41, Military Science	1	(0,3)	M. S. 42, Military Science	⅔	(0,2)
T. C. 50, Thesis	1	(0,3)	T. C. 51, Thesis	1	(0,3)
Electives	3⅔		Electives	4	
	18			18	

WEAVING AND DESIGNING

This course has been provided to meet a growing demand of those who desire special instruction relating to the weaving and designing of fabrics. Special attention is paid to decorative design, dobby design, jacquard design, pattern weaving and rayon processing. (See School of Textiles, for complete write-up.)

WEAVING AND DESIGNING

Freshman Year

(Same as Textile Engineering. See Page 77)

Sophomore Year

First Semester			*Second Semester*		
Drawing 25, Mechanical	⅔	(0,2)	Arch. 14, Drawing	1⅓	(0,4)
English 21, Lit. & Adv. Comp.	2	(2,0)	English 22, Lit. & Adv. Comp.	2	(2,0)
Math. 23, Dif. Calculus	3	(3,0)	M. E. 24, Machine Shop	1	(0,3)
M. E. 23, Machine Shop	1	(0,3)	M. S. 22, Military Science	1	(0,3)
M. S. 21, Military Science	1	(0,3)	Physics 12, General	3⅔	(3,2)
Physics 11, General	3⅔	(3,2)	W. D. 22, Advanced Designing	2	(2,0)
W. D. 21, Elem. Design	2	(2,0)	W. D. 24, Weaving	1	(0,3)
W. D. 23, Weaving	⅔	(0,2)	Y. M. 22, Cards & Drwg. Frms.	2⅔	(2,2)
Y. M. 21, Pickers	2⅔	(2,2)	Y. M. 24, Mill Problems	3	(3,0)
Y. M. 23, Mill Problems	2	(2,0)	Y. M. 28	⅔	(0,2)
	18⅔			18⅓	

Junior Year

Arch. 23.5, Dec. Des. & Color	1 (0,3)	Arch. 24.5, Dec. Des. & Color	1 (0,3)
E. E. 35, Elec. Eng.	2⅔ (2,2)	English 32, Business Law	2 (2,0)
M. S. 31, Military Science	1 (0,3)	M. E. 38, Mech. Eng.	3 (3,0)
*M. E. 31, Mechanics	3 (3,0)	M. E. 38.5, M. E. Lab.	⅔ (0,2)
W. D. 31, Dobby Design	2 (2,0)	M. S. 32, Military Science	⅔ (0,2)
W. D. 33, Fabric Analysis	1 (0,2)	W. D. 32, Adv. Dobby Design	2 (2,0)
W. D. 35, Weaving	1⅔ (1,2)	W. D. 34, Fabric Analysis	1 (0,2)
W. D. 37, Rayon Processing	1⅔ (1,2)	W. D. 36, Weaving	⅔ (0,2)
Y. M. 31, Roving Frames	2⅔ (2,2)	Y. M. 41, Spinning	3 (2,3)
Electives	3	Electives	4
	19⅔		18

Senior Year

Arch. 33.5, Dec. Des. & Comp.	1 (0,3)	Sociol. 31, Sociology	2 (2,0)
English 31, Public Speaking	2 (2,0)	M. S. 42, Military Science	⅔ (0,2)
E. and G. 21, Econ.	2 (2,0)	Text. Chem. 46.5, Microscopy	1⅓ (1,1)
M. S. 41, Military Science	1 (0,3)	Text. Chem. 40, Dyeing	⅔ (0,2)
T. Chem. 39, Dyeing	⅔ (0,2)	W. D. 42, Jacquard Design	2⅓ (1,4)
W. D. 41, Jacquard Weaving	1⅔ (1,2)	W. D. 44, Warp Preparation	2 (2,0)
W. D. 43, Cost Finding	3 (3,0)	W. D. 46.5, Pattern Weaving	2 (0,6)
W. D. 45.5, Pattern Weaving	2 (0,6)	W. D. 48, Knitting	⅔ (0,2)
Y. M. 32, Doubling & Dftg.	1⅔ (1,2)	W. D. 50, Thesis	1 (0,2)
Electives	3⅔	Y. M. 44, Mill Econ.	2 (2,0)
		Electives	3⅓
	18⅔		18

*Repeated second semester; approved option may be taken first semester.

SCHOOL OF VOCATIONAL EDUCATION

The School of Vocational Education offers four-year curricula leading to the degree of Bachelor of Science in Agricultural Education, Education (Teaching of Science), Industrial Education and Textile Industrial Education. Courses are also made available for students of the other Schools of the College. By making a proper program of studies it is possible for students to meet the professional requirements in subject matter and in education and to qualify for the teacher's certificate in this State. Students who are planning to teach in high schools are advised to plan not only their courses in education, but their subject-matter courses so as to meet the State requirements for the particular type of work in the state in which they expect to teach. The office of the School of Vocational Education has a file of information on this subject. Students who are interested are invited to consult the Dean and other members of the Vocational Education staff for information.

While employment cannot be guaranteed, the School of Vocational Education maintains a Teacher Placement Service where students who desire aid in securing employment may register and

where superintendents of schools and other employers may receive assistance in getting in touch with prospective teachers. Both students and employers of teachers are invited to use this service.

VOCATIONAL AGRICULTURAL EDUCATION

The curriculum in Agricultural Education is designed to give the student a cross section of the types of agriculture in the State and to provide an opportunity to study agriculture from the standpoint of the teacher, the practical farmer, and the closely related agricultural business man where the farm as a unit is emphasized.

Professional training of the student is planned to provide an opportunity for the study of a cross section of rural life and its organizations with particular emphasis on the contribution of the public school. Students participate in community organizations as a part of their first-hand training. They are taught to cooperate with State and National organizations which affect rural life and agriculture directly and indirectly. This curriculum with the central aim on teaching is designed primarily to train students for the professional field of teaching vocational agriculture and other closely related fields in which a knowledge of the business of farming is essential, and in which skill in dealing with groups of people as well as with individuals is important.

Practice teaching facilities are provided in regular public school situations in several subjects in cooperation with the State Department of Education and nearby public schools. Publishers of State-adopted textbooks have been invited to place copies of their publications on file in the Education library. Many have responded. These publications are available for examination by teachers and prospective teachers during the regular session and during the summer school.

One hundred forty semester hours credit is required for graduation. Fourteen semester hours free electives are allowed.

Teachers of agriculture and other persons who are interested in graduate training in Agricultural Education should procure a copy of the 1935 summer school catalog as soon as published. Graduate work will be offered in the 1935 summer session in Agricultural Education.

AGRICULTURAL EDUCATION

Freshman Year

First Semester

Agr. 11, Field Crops	3	(3,0)
Bot. 13, Agricultural	2⅔	(2,2)
Chem. 11, General	3⅔	(3,2)
Draw. 11, Freehand	⅔	(0,2)
Eng. 15, Comp. & Am. Lit.	3	(3,0)
E. and G. 15, Amer. Gov't.	3	(3,0)
M. S. 11, Military Science	1	(0,3)
Voc. Ed. 11, Orientation	1	(1,0)
	18	

Second Semester

A. H. 12, Types Breeds & Mkt. Classes	3⅔	(3,2)
Bot. 14, Agricultural	3⅓	(2,4)
Chem. 12, General	3⅔	(3,2)
Draw. 12, Mechanical	⅔	(0,2)
Eng. 16, Comp. & Am. Lit.	3	(3,0)
Math. 15, Agricultural	3	(3,0)
M. S. 12, Military Science	1	(0,3)
	18⅓	

Sophomore Year

Chem. 21, Agricultural	2⅔	(2,2)
Dairy 21, Intro. Dairying	3⅔	(3,2)
Eng. 21, Lit. & Adv. Comp.	2	(2,0)
Geol. 21, Agricultural	3	(3,0)
M. S. 21, Military Science	1	(0,3)
Physics 27, General	3⅔	(3,2)
Z. & E. 21, General Zool.	2⅔	(2,2)
	18⅔	

Ag. Ec. 22, Ele. Ag. Ec.	3	(3,0)
Agr. 20, Soils	2⅔	(2,2)
Agr. 22, Farm Mach. or Chem. 22, Agricultural	2⅔	(2,2)
Eng. 22, Lit. & Adv. Comp.	2	(2,0)
Hort. 22, General Hort.	3⅔	(3,2)
M. S. 22, Military Science	1	(0,3)
Voc. Ed. 22, Intro. to Voc. Ed.	1	(1,0)
Electives	2	
	18	

Junior Year

Z. & E. 22, Intro. and Applied Entomology	2⅔	(2,2)
Agr. 31, Fert. & Manures	2	(2,0)
A. H. 31, Feeds & Feeding	2⅔	(2,2)
Eng. 31, Public Speaking	2	(2,0)
M. S. 31, Military Science	1	(0,3)
Voc. Ed. 31, Intro. Ag. Ed.	3	(1,6)
Electives	3	
	16⅓	

Suggested Electives:

Agr. 35, Farm Motors	3	(2,3)
A. H. 35, Meats	2	(0,6)
Ag. Ec. 33, Stat. Meth.	2⅔	(2,2)
Dairy 31, Judging	⅔	(0,2)
Dairy 35, Feeding & Mgt.	2⅔	(2,2)
Hort. 31, Plant Prop.	2⅔	(2,2)
Bact. 31, General	3⅓	(2,4)
Ag. Ec. 34, Public Finance (2⅔) or E. and G. 21, Economics or Eng. 32, Business Law	2	(2,0)

Ag. Ec. 32, Farm. Org. 2⅔ or Agron. 30, Forage Crops	3	(3,0)
Agr. 42, Soil Fert. & Management (2) or A. H. 34, Pork Prod.	2⅔	(2,2)
M. S. 32, Military Science	⅔	(0,2)
P. H. 32, Farm Poultry	3⅔	(3,2)
Voc. Ed. 34, Problems in Ag. Ed.	3	(3,0)
Electives	3	
	16	

Suggested Electives

Agr. 30, Forage Crops	3	(3,0)
A. H. 32, Judging	⅔	(0,2)
Agr. 32, Genetics	2⅔	(2,2)
A. H. 34, Pork Prod.	2⅔	(2,2)
Bot. 32, Forestry	2⅔	(2,2)
Ag. Ec. 30, Public Finance	2⅔	(2,2)
Bot. 30, Plant Phys.	3⅓	(2,4)

Senior Year

Ag. Ec. 43, Agri. Finance (2) or Agr. 45, Crop Nutrition	2	(2,0)
Ag. Ec. 47, Farm Problems	2	(2,0)
Agr. 47, Adv. Crop Lab.	⅔	(0,2)
Agr. 55, Survey & Drain. (3) or Dairy 35, Feeding & Mgt.	2⅔	(2,2)
M. S. 41, Military Science	1	(0,3)
Vet. Sc. 41, Diseases of Animals	2⅔	(2,2)
Voc. Ed. 41, Pr. Voc. Ed.	4	(1,9)
Electives	3	
	18	

Z. & E. 42, Econ. Ent.	2⅔	(2,2)
Hort. 42, Com. Pomology or Hort. 44, Truck Crops	2⅔	(2,2)
M. S. 42, Military Science	⅔	(0,2)
Voc. Ed. 40, Prac. Teach.	5	(0,15)
Voc. Ed. 42, Meth. in Ag. Ed.	3	(3,0)
Electives	3*	
	17	

Suggested Electives:		
Ag. Ec. 41, Pr. Mkt.	3	(3,0)
Ag. Ec. 43, Ag. Finance	2	(2,0)
Ag. Ec. 45, Farm Accounting	2⅔	(2,2)
Agr. 55, Survey. & Drain.	3	(2,3)
Agr. 49, Plant Breeding	2⅔	(2,2)
Agr. 53, Cotton	2	(2.0)
Bot. 41, F. C. Diseases	2⅔	(2,2)
Bot. 43, Orchard & Truck Crop Diseases	2⅔	(2,2)
Hort. 43, Landscape Gard.	2⅔	(2,2)

Suggested Electives:		
Ag. Ec. 40, Farm Movements	3	(3,0)
Ag. Ec. 42, Rural Soc.	3	(3,0)
Ag. Ec. 44, Land Econ.	3	(3,0)
Agr. 42, Soil Fert. & Mgt.	2	(2,0)
Agr. 44, Adv. Soil Lab.	⅔	(0,2)
Agr. 46, Farm Buildings	3	(2,3)
Dairy 48, Nutrition	2	(2,0)
Hort. 42, Com. Pomology	2⅔	(2,2)
Hort. 44, Truck Crops	2⅔	(2,2)
P. H. 42, Adv. Poultry	2⅔	(2,2)
Vet. Sc. 42, Diseases	2⅔	(2,2)
Z. & E. 42, Econ. Ent.	2⅔	(2,2)
Z. & E. 44, Beekeeping	1⅔	(1,2)

*Students who have not had E. and G. 15 must take E. and G. 15 or 41.

Agricultural Education students who desire to qualify for a degree in Agriculture may do so by completing the requirements in the Agricultural Education Curriculum and by electing Bacteriology 2 2/3, Genetics 2 2/3, Farm Machinery 2 2/3, and Forestry 2 2/3 semester hours.

EDUCATION

(Teaching of High School Science)

The purpose of this curriculum is to train for high school teaching in the fields of science indicated below. The curriculum has been planned with the view to providing both subject matter and professional courses. It meets the State requirements for certification in South Carolina under the new regulations. The subject-matter fields are designated as majors and minors. The technical and vocational groups are included with a view to providing an occupational background for teachers. Free electives are included to permit the student to exercise his own freedom in at least a part of his work. Students who desire to enter into the Vocational Agriculture field or the Industrial Education field should enroll in one of those specialized curricula. (See pages 82 and 85).

For the degree of Bachelor of Science in Education the following grouping must be made: a major of 20 semester hours, a first minor of at least 12 semester hours, a second minor of at least 12 semester hours, (The semester hours in the major and minor groups may include required subjects in these fields as indicated below). At least 12 semester hours in a vocational or technical field and 14 semester hours free electives are also required. Other elections are subject to the approval of the Dean. A total of 136

semester hours is required for graduation. The groups of majors, minors, etc., are indicated below.

EDUCATION

Freshman Year

First Semester			*Second Semester*		
Botany 13, Agricultural	2⅔	(2,2)	Botany 14, Agricultural	3⅓	(2,4)
Chemistry 11, General	3⅔	(3,2)	Chemistry 12, General	3⅔	(3,2)
English 15, Comp. and Am. Lit.	3	(3,0)	English 16, Comp. and Am. Lit.	3	(3,0)
History 14, Am. Econ. History	2	(2,0)	E. and G. 12, American Gov't.	2	(2,0)
Math. 11 or 17	5 or 3		Math. 12 or 18	5 or 3	
M. S. 11, Military Science	1	(0,3)	M. S. 12, Military Science	1	(0,3)
Vocational Education	2				
	19⅓ or 17⅓			18 or 16	

Sophomore Year

Bact. 31, General Bacteriology	3⅓	(2,4)	E. and G. 21, Economics	2	(2,0)
English 21, Lit. and Adv. Comp	2	(2,0)	English 22, Lit and Adv. Comp.	2	(2,0)
M. S. 21, Military Science	1	(0,3)	M. S. 22, Military Science	1	(0,3)
Chemistry 21 or 23	2⅔	(2,2)	Chemistry 22 or 24	2⅔	(2,2)
Z. and E., Gen. Zoology	2⅔	(2,2)	Physics 14 or 22-24	3⅔	(3,2)
Physics 13 or 21-23	3⅔ or 5	(3,2)	Voc. or Tech. group	3	
Voc. or Tech. group	3		Free electives	2	
	18⅓ or 20⅓			16⅓ or 18⅓	

Junior Year

English 31, Public Speaking	2	(2,0)	Sociol. 31, Sociology	2	(2,0)
M. S. 31, Military Science	1	(0,3)	M. S. 32, Military Science	⅔	(0,2)
Voc. Ed. 35, Psychology	3	(2,3)	Voc. Ed. 45, Teach. Science	3	(3,0)
Voc. Ed. 31, Principles	3	(3,0)	Voc. or Tech. group	3	
Z. and E. Int. to Appl. Ent.	2⅔	(2,2)	Major and Minor	4	
Voc. or Tech. group	3		Free Electives	5	
Major and Minor	3⅓				
	18			17⅔	

Senior Year

Voc. Ed. 49, Health and P. Ed.	2	(2,0)	Voc. Ed. 47, Hist. & Philos. of Education	2	(2,0)
Voc. Ed. 51, Pract. Teaching	3	(0,6)	Voc. Ed. 52, Pract. Teaching	3	(0,6)
Voc. Ed. 59, Administration	3	(3,0)	M. S. 42, Military Science	⅔	(0,3)
M. S. 41, Military Science	1	(0,3)	Major and Minor	5⅔	
Major and Minor	5		Free electives	5	
Free electives	2				
	16			16⅓	

I MAJORS: 1. Biological Science including Botany, Bacteriology and Zoology. 2. Chemistry. 3. Mathematics. 4. Physics.

II MINORS: First Minor: One of the above not classed as major.
Second Minor: Social Science including History, Economics.

III VOCATIONAL OR TECHNICAL GROUPS
1. **Agriculture**—Agronomy, Animal Husbandry, Botany and Bacteriology, Horticulture, Poultry.
2. **Textiles**—Textile Chemistry, Weaving and Designing, Yarn Manufacturing.
3. **Engineering**—Architecture, Drawing, Civil, Electrical, Mechanical.

INDUSTRIAL EDUCATION

The curriculum in Industrial Education is intended to prepare students to teach industrial subjects in the high schools and to supervise the teaching of evening trade classes. The four-year curriculum includes the study of the major industries of South Carolina. The freshman year includes training in textiles. Students who complete this curriculum are prepared to teach manual training, drawing, woodwork, home mechanics, general subjects, and mathematics. A total of 140 semester hours is required for graduation. Provision is made for 14 semester hours free electives. A student may take as many as 20 hours per semester.

INDUSTRIAL EDUCATION

Freshman Year

First Semester			*Second Semester*		
Chem. 11, General	3⅔	(3,2)	Chem. 12, General	3⅔	(3,2)
Drawing 13, Engineering	1⅓	(0,4)	Drawing 14, Engineering	1⅓	(0,4)
English 15, Comp. & Am. Lit.	3	(3,0)	Eng. 16, Comp. & Am. Lit.	3	(3,0)
History 14, Am. Ec. Hist.	2	(2,0)	E. and G. 12, Gov. & Pol. Parties	2	(2,0)
Math. 17, Gen. Sci. Math.	3	(3,0)	Math. 18, Gen. Sci. Math.	3	(3,0)
M. E. 17 or 12 & 14, Shop	2	(0,6)	M. E. 12 & 14 or 17, Shop	2	(0,6)
M. S. 11, Military Science	1	(0,3)	M. S. 12, Military Science	1	(0,3)
Voc. Ed. 11, Orientation	1	(1,0)	W. D. 12, Gen. Textiles	1⅔	(1,2)
Y. M. 11, Gen. Textiles	1⅔	(1,2)			
	18⅔			17⅔	

Summer industrial employment minimum of four weeks.

Sophomore Year

C. E. 23, Surveying	1⅔	(1,2)	Draw. 26, Mechanical	⅔	(0,2)
Draw. 25, Mechanical	⅔	(0,2)	Eng. 22, Lit. & Adv. Comp.	2	(2,0)
Eng. 21, Lit. & Adv. Comp.	2	(2,0)	Math. 26, Industrial Math.	3	(3,0)
E. and G. 21, Economics	2	(2,0)	M. E. 24, Machine Shop	1	(0,3)
Math. 25, Industrial Math.	3	(3,0)	M. S. 22, Military Science	1	(0,3)
M. E. 23, Machine Shop	1	(0,3)	Physics 22 & 24, General	5	(4,3)
M. S. 21, Military Science	1	(0,3)	Voc. Ed. 23, Intro. Ind. Ed.	1	(1,0)
Physics 21 & 23, General	5	(4,3)	Voc. Ed. 28, Obs. of Ind. Teaching	1	(0,2)
			Electives	2	
	16⅓			16⅔	

Summer industrial employment minimum of four weeks.

Junior Year

Voc. Ed. 33.5, Art Metal Work	2	(1,3)	Eng. 32, Business Law	2	(2,0)
Eng. 31, Public Speak.	2	(2,0)	M. E. 40, 40a, Applied Mech.	2⅔	(2,2)
M. E. 33, 33a, M. Engr. & Lab.	3⅔	(3,2)	M. S. 32, Military Science	⅔	(0,2)
M. S. 31, Military Science	1	(0,3)	Voc. Ed. 38, Teaching of Drawing	3	(2,2)
Voc. Ed. 31.6, Ind. Arts	2⅔	(2,2)	Voc. Ed. 32.6, Ind. Arts	2⅔	(2,2)
Voc. Ed. 35, Psychol. for Teachers	3	(2,2)	Voc. Ed. 33, Org. of Courses of Study	3	(3,0)
Voc. Ed. 39, Prin. of Sec. Ed.	3	(3,0)	Electives	3	
Electives	2⅓				
	19⅔			17	

Senior Year

Arch. 41.5, Art Appreciation	2	(2,0)	Arch. 42.5, Ind. Arts Design	2/3	(0,2)
E. E. 35, Electr. Mach.	2 2/3	(2,2)	E. E. 38, Voc. Electricity	1 2/3	(1,2)
*Sociol. 31, Sociology	2	(2,2)	Auto Mechanics or Welding	3	(2,2)
Auto Mechanics or Metal Work	3	(2,2)	M. S. 42, Military Science	2/3	(0,2)
M. S. 41, Military Science	1	(0,3)	*Voc. Ed. 43, Pract. Teach.	5	(0,10)
Phys. 33, Astronomy or Adv. Physics	2	(2,0)	Voc. Ed. 46, Tech. of Teaching	3	(3,0)
Electives	3 1/3		Electives	4	
	16			18	

Required for graduation 140 semester hours. Minimum 16; maximum 20 semester hours per semester.
*Offered both semesters.

TEXTILE INDUSTRIAL EDUCATION

This course has for its purpose the preparation of young men for positions of usefulness and responsibility in vocational departments of schools located in textile communities. The course includes instruction in the fundamental principles of education, of engineering, and of the textile industry.

The prime purpose of the course is to prepare for positions as teachers of trade and industrial subjects as such and as principals of schools in mill communities as well as local supervisors of industrial education. As the textile industry is the dominant one in the state, that industry is given special prominence. The course is essentially a combination of instruction in the textile industry and the training of industrial teachers.

One hundred forty semester hours credit is required for graduation. Fourteen semester hours free electives are allowed.

TEXTILE INDUSTRIAL EDUCATION

Freshman Year

First Semester			*Second Semester*		
Chem. 11, General	3 2/3	(3,2)	Chem. 12, General	3 2/3	(3,2)
Drawing 13, Engineering	1 1/3	(0,4)	Drawing 14, Engineering	1 1/3	(0,4)
Eng. 15, Comp. & Am. Lit.	3	(3,0)	Eng. 16, Comp. & Am. Lit.	3	(3,0)
Hist. 14, Am. Ec. Hist.	2	(2,0)	E. and G. 12, Am. Gov't.	2	(2,0)
Math. 17, Gen. Sci. Math.	3	(3,0)	Math. 18, Gen. Sci. Math.	3	(3,0)
M. E. 17 or 12 & 14, Shop	2	(0,6)	M. E. 17 or 12 & 14, Shop	2	(0,6)
M. S. 11, Military Science	1	(0,3)	M. S. 12, Military Science	1	(0,3)
Voc. Ed. 11, Orientation	1	(1,0)	W. D. 12, Gen. Textiles	1 2/3	(1,2)
Y. M. 11, Gen. Textiles	1 2/3	(1,2)			
	18 2/3			17 2/3	

Summer Industrial employment minimum of four weeks

Sophomore Year

Drawing 25, Mechanical	⅔	(0,2)	Drawing 28, Mechanical	⅔	(0,2)
Eng. 21, Lit. & Adv. Comp.	2	(2,0)	Eng. 22, Lit. & Adv. Comp.	2	(2,0)
Math. 25, Industrial Math.	3	(3,0)	M. E. 24, Machine Shop	1	(0,3)
M. S. 21, Military Science	1	(0,3)	M. S. 22, Military Science	1	(0,3)
Physics 11, General	3⅔	(3,2)	Physics 12, General	3⅔	(3,2)
W. D. 21, Elemen. Design	2	(2,0)	W. D. 24, Weaving	⅔	(0,2)
W. D. 23, Weaving	⅔	(0,2)	W. D. 26, Mill Problems	3	(3,0)
Y. M. 21, Pickers	2⅔	(2,2)	Y. M. 22, Cards & Draw F.	2⅔	(2,2)
*Y. M. 23, Mill Problems	2	(2,0)	*Y. M. 28, Cot. Grading	⅔	(0,2)
			Voc. Ed. 23, Intro. to I. Ed.	1	(1,0)
			Voc. Ed. 26, Observ. of Teaching	1	(0,2)
	17⅔			17⅓	

Summer Industrial employment minimum of four weeks

Junior Year

Sociol. 31, Sociology	2	(2,0)	Eng. 32, Business Law	2	(2,0)
M. S. 31, Military Science	1	(0,3)	Voc. Ed. 33, Org. of Courses of Study	3	(3,0)
Voc. Ed. 35, Psychol. for Teachers	3	(2,2)	M. E. 33, Mech. Engr.	3	(3,0)
W. D. 31, Dobby Design	2	(2,0)	M. E. 33.5, Mech. Engr. Lab.	⅔	(0,2)
W. D. 33, Fab. Analysis	1	(0,2)	M. S. 32, Military Science	⅔	(0,2)
W. D. 35, Fancy Loom Fixing	1⅔	(1,2)	W D. 34, Fab. Analysis	1	(0,2)
Y. M. 31, Rov. Frames	2⅔	(2,2)	W. D. 36, Fancy Loom Fixing	⅔	(0,2)
Y. M. 41, Spinning	3	(2,3)	*Y. M. 32, Doub. & Draft.	1⅔	(1,2)
Electives	2		Y. M. 42, Combers	1⅔	(1,2)
			Electives	3	
	18⅓			17⅓	

Senior Year

E. E. 35, Elec. Engr.	2⅔	(2,2)	M. S. 42, Military Science	⅔	(0,2)
E. and G. 21, Economics	2	(2,0)	*Voc. Ed. 43, Prac. Teach.	5	(0,10)
Eng. 31, Public Speaking	2	(2,0)	Voc. Ed. 46, Tech. of Teach.	3	(3,0)
M. S. 41, Military Science	1	(0,3)	W. D. 44, Warp Prep.	2	(2,0)
W. D. 43, Cost Finding	3	(3,0)	Y. M. 44, Mill Econ.	2	(2,0)
Electives	6		Electives	3⅔	
	16⅔			16⅓	

*Offered both semesters.

DESCRIPTION OF COURSES

*AGRONOMY**

Mr. Cooper
Mr. Nutt Mr. Collings Mr. Lipscomb

Agr. 11—Field Crops—Semester 1 (3 and 0) 3 cr.

Purpose: To give the student a fundamental course in general field crops. *Principal Topics*: Origin, history, botanical characteristics, physiology, ecology, varieties, breeding, soil adaptation, fertilizer requirements, and the cultural methods employed in the production of the most important crops of the United States. (*Production of Field Crops*—Hutchinson and Wolfe.)

Mr. Collings Mr. Lipscomb

Agr. 20—Soils—Semester 2 (2 and 2) 2 2/3 cr.

Purpose: To give the student a fundamental course in soils. *Principal Topics*: Basic principles of soil physics, soil fertility, soil biology, and soil management. It deals with the soil as a reservoir for water, as a medium for root development, as a source of nutrients, and as a home of organisms. (*The Nature and Properties of Soils*—Lyon and Buckman.)

Mr. Collings Mr. Lipscomb

Agr. 22—Farm Machinery—Semester 2 (2 and 2) 2 2/3 cr.

Purpose: To give theoretical and practical training in the operation of modern farm equipment. *Principal Topics*: Construction, operation, requirements and utilization of tillage, seeding, cultivating, harvesting and belt operated farm machinery. (*Agricultural Machinery*—Davidson.)

Mr. Nutt

Agr. 23—Agr. Mechanics—Semester 1 (2 and 3) 3 cr.

Purpose: To give the theoretical and practical application of the mechanics pertaining to agriculture. *Principal Topics*: Soldering, cement work, rope work, belts, pulleys and laces, leather work, pipe fitting, painting, wood finishing and glazing. (*Mechanical Training*—Boss, Dent and White.)

Mr. Nutt

*On the following pages by Departments will be found: Name of Department, Staff, Subject, Catalog Number (in general, courses numbered 11-19 inclusive are Freshman courses, 20-29 Sophomore, 30-39 Junior, 40-60 Senior), title of course, semester offered, class and laboratory hours per week, credit in semester hours.

AGR. 30—FORAGE CROPS—Semester 2 (3 and 0) 3 cr.

Purpose: To give the student a thorough knowledge of the botanical characteristics, cultural practices employed, and utilization of the leading forage plants of the United States. *Principal Topics*: The origin and adaptation of forage crops, methods of production, treatment of pastures, meadows, etc., and an intensive study of the leading forage plants with special emphasis given to those adapted to South Carolina conditions. (*Forage Plants and Their Culture*—Piper.)

MR. LIPSCOMB

AGR. 31—FERTILIZERS AND MANURES—Semester 1 (2 and 0) 2 cr.

Prerequisite, Required: Agr. 20.

Purpose: To give the student a thorough knowledge of the sources, characteristics, and uses of fertilizers and manures. *Principal Topics*: Sources, mining and manufacturing, composition, physical characteristics and use of fertilizers and manures. (*Commercial Fertilizers. Their Sources and Use*—Collings.)

MR. COLLINGS

AGR. 32—GENETICS—Semester 2 (2 and 2) 2 2/3 cr.

Purpose: To instruct students in the basic principles of genetics. *Principal Topics*: Heredity and variation, laws of heredity, application of genetic principles to plant and animal improvement. (*Principles of Genetics*—Sinnott and Dunn.)

MR. COOPER MR. LIPSCOMB

AGR. 33—PROJECTS IN GENERAL SHOP—Semester 1 (1 and 3) 2 cr.

Purpose: To instruct students, through project work, in the fundamental mechanics related to agricultural problems. *Principal Topics*: Sheet metal work, tool sharpening, concrete mixing, form construction, belts, pulleys and laces, pipe fitting and gasoline engine repair. (*Mechanical Training*—Boss, Dent and White.)

MR. NUTT

AGR. 35—MOTORS AND POWER MACHINERY—Semester 1 (2 and 3) 3 cr.

Purpose: To give to the student theories of operation, construction, and utilization of internal combustion engines. *Principal Topics*: History of the internal combustion engine, nomenclature and definitions, principles of operation, power and its measurement and gas engine troubles. (*Farm Gas Engines and Tractors*—Jones.)

MR. NUTT

AGR. 42—SOIL FERTILITY AND MANAGEMENT—Semester 2 (2 and 0) 2 cr.

Prerequisite, Required: Agr. 20 and Agr. 31.

Purpose: A detailed study of soil composition and soil management practices. *Principal Topics*: Composition of the soil, influence of crop rotations and fertilizers on soil productivity, influence of various methods of tillage on crop yields and a general study of those factors essential for the practical utilization of South Carolina soils. (*Soil Management*—Bear.)

MR. COLLINGS

AGR. 44—ADVANCED SOIL LABORATORY—Semester 2 (0 and 2) 2/3 cr.

Prerequisite, Required: Agr. 20.

Purpose: To develop laboratory technic and to make students proficient in making physical and chemical determinations of soils. *Principal Topics*: Mechanical analysis, determinations of volume weight, soil water, organic matter, nitrogen, phosphoric acid and potash. (*Soil Characteristics*—Emerson.)

MR. COLLINGS

AGR. 45—CROP NUTRITION—Semester 1 (2 and 0) 2 cr.

Prerequisite, Required: Agr. 11.

Purpose: To give the student a comprehensive knowledge of the geographical distribution, soil and fertilizer requirements of important farm crops. *Principal Topics*: Economic importance of various farm crops, climatic requirements for various crops, important soil factors influencing crop production, nutrient requirements of crops. (*The Small Grains*—Carlton; and *The Corn Crop*—Montgomery.)

MR. COOPER

AGR. 46—FARM BUILDINGS—Semester 2 (2 and 3) 3 cr.

Prerequisite, Required: Drawing 25 and 28.

Purpose: To assist students in the design and construction of farm buildings. *Principal Topics*: Properties of farm building materials, principles of concrete construction, essentials and design of typical structures, wood preservatives, specification and cost estimating and farmstead sanitation. (*Farm Buildings*—Carter and Foster.)

MR. NUTT

AGR. 47—ADVANCED CROP LABORATORY—Semester 1 (0 and 2) 2/3 cr.

Purpose: To give advanced students detailed information on important agronomic problems. *Principal Topics*: Experimental methods used in agronomy, morphological characters, classification, and yielding capacity of important varieties of various farm crops. (*Bulletins and Periodicals.*)

Mr. Cooper Mr. Lipscomb

Agr. 48—Advanced Farm Machinery Laboratory—Semester 2 (0 and 3) 1 cr.

Prerequisite, Required: Agr 22.

Purpose: To provide advanced practical training for students in the College of Agriculture whose major is Agricultural Engineering. *Principal Topics*: Testing and adjusting of tractors, seeding, cultivating, harvesting and belt operated farm equipment.

Mr. Nutt

Agr. 49—Plant Breeding—Semester 1 (2 and 2) 2 2/3 cr.

Prerequisite, Required: Agr. 32.

Purpose: To present the application of the basic principles of genetics in the improvement of crop plants. *Principal Topics*: Biometrical methods, field plat technic, modes of reproduction of plants and methods of improving various crop plants. (*Breeding Crop Plants*—Hayes and Garber.)

Mr. Cooper Mr. Lipscomb

Agr. 51—Seminar—Semester 1 (1 and 0) 1 cr.

Purpose: To consider agronomic topics of special interest in crop production. *Principal Topics*: Material occurring in current numbers of professional journals and bulletins.

Mr. Cooper

Agr. 52—Seminar—Semester 2 (1 and 0) 1 cr.

Purpose: To give the student the latest published and unpublished information concerning recent developments in the field of soil science. *Principal Topics*: Topics taken from latest published bulletins, reports and professional magazines.

Mr. Collings

Agr. 53—Cotton—Semester 1 (2 and 0) 2 cr.

Prerequisite, Required: Agr. 11.

Purpose: To give the student a thorough knowledge of all phases of cotton production. *Principal Topics*: History, morphology, physiology,

varieties, methods of cultivation, fertilization, insect and disease control, breeding, harvesting and grading of American Upland cotton. (*The Production of Cotton*—Collings.)

Mr. Collings

Agr. 55—Agriculture Surveying and Draining—Semester 1 (2 and 3) 3 cr.

Prerequisite, Suggested: Math 11.

Purpose: To fulfill the need of instruction dealing with drainage, terracing, reclamation and surveying problems pertaining to farms. *Principal Topics*: Elementary surveying, design and study of drainage systems, prevention of soil erosion with special emphasis on terracing, land reclamation and the use of explosives. (*Land Drainage and Reclamation*—Ayres and Scoates.)

Mr. Nutt

Agr. 61, 62—Introduction to Research and Thesis—Semester 1 and 2 (0 and 3) 1 cr.

Purpose: To teach the student how to attack and solve a research problem. *Principal Topics*: A suitable problem is assigned each student The results of the study are presented in thesis form.

Agronomy Staff

AGRICULTURAL ECONOMICS AND RURAL SOCIOLOGY

Mr. Aull*

Mr. Williams Mr. Mills Mr. Guin Mr. Patrick

Ag. Ec. 22—Elementary Agricultural Economics—Semester 2 (3 and 0) 3 cr.

Purpose: To acquaint the student with the fundamental principles of Economics in their relation to Agriculture. *Principal Topics*: By the use of crop reports, bulletins, and such data, present-day agriculture in the United States and South Carolina is studied; the students are taught the terms in general use in agricultural economics, the factors of production, the systems of land tenure; and the relation of the fact to the underlying principle is discussed.

Mr. Mills

Ag. Ec. 32—Farm Organization and Management—Semester 2 (2 and 2) 2 2/3 cr.

Prerequisite: Ag. Ec. 22.

*On Leave.

Purpose: To study the principles and problems involved in organizing and operating the successful farm business. *Principal Topics*: Farm organization and management; economic specialization in relation to agriculture, types of farming and the economic, physical and biological factors determining them, selection and combination of farm enterprises for highest profits, physical and financial organizations of farms, farm operation in areas representative of the important types. (*Economics of Farm Organization and Management*—Holmes.)

Mr. Mills Mr. Guin

Ag. Ec. 33—Statistical Methods—Semester 1 (2 and 2) 2 2/3 cr.

Prerequisite: Ag. Ec. 22.

Purpose: A course on the meaning and application of statistical methods which will train students to make ordinary statistical studies. *Principal Topics*: Sampling, tabular and graphic presentation, averages, ratios and coefficients, dispersion, the theory of probability and error, index numbers, trends and correlation. (*Principles and Methods of Statistics*—Chaddock).

Mr. Williams

Ag. Ec. 34—Public Finance—Semester 2 (2 and 2) 2 2/3 cr.

Prerequisite: Ag. Ec. 22, 31 and 33.

Purpose: To familiarize the student with the problems of taxation and their economic and social implications with particular reference to agriculture. *Principal Topics*: The essentials of a just and equitable tax; a critical examination of some of the more common revenue-raising measures; budgets; public expenditures, etc. The student will be given opportunity to study in detail the relative burden of state and local taxes upon different groups of individuals.

Mr. Aull

Ag. Ec. 41—Principles of Marketing—Semester 1 (3 and 0) 3 cr.

Prerequisite: Ag. Ec. 22, 31.

Purpose: To study problems encountered by farmers in marketing their products. Different channels of trade and types of marketing agencies are studied. *Principal Topics*: A course dealing with the principles of marketing, marketing programs, marketing services, marketing mechanism, market grades and standardization, storage and warehousing, transportation, future trading, inspection and grading of perishable and staple products. This course includes a discussion of the principles of cooperative marketing. (*Marketing Agricultural Products*—Clark and Weld.)

Mr. Mills Mr. Guin

Ag. Ec. 42—Rural Sociology—Semester 2 (3 and 0) 3 cr.

Prerequisite: Ag. Ec. 22.

Purpose: To study human relations as modified by life in the country. *Principal Topics*: The farm family; its food requirements; its housing, health, schooling; recreational opportunities. The relation of the farm family to land, whether as owner or tenant. (*The Social Economics of Agriculture*—Gee.)

Mr. Williams

Ag. Ec. 43—Agricultural Finance—Semester 1 (2 and 0) 2 cr.

Prerequisite: Ag. Ec. 22, 31 and 33.

Purpose: To analyze financial requirements of individual farmers and of farmers' marketing and purchasing organizations. Credit institutions serving farmers and their organizations are studied. *Principal Topics*: An analysis is made of credit requirements of farmers; investor and depositors as sources of credit; a study of financial institutions serving agriculture, such as farm mortgage companies, insurance companies, federal and joint stock land banks, intermediate credit banks, livestock loan companies, national and state banks, and the federal reserve banks; principles upon which credit is extended, and the cost of credit. (*Principles of Agricultural Credit*—Lee.)

Mr. Mills Mr. Guin

Ag. Ec. 44—Land Economics—Semester 2 (3 and 0) 3 cr.

Prerequisite: Ag. Ec. 22, 31 and 33; Senior Standing.

Purpose: To study land as a resource, as a factor in production and its relation to society. *Principal Topics*: A thorough and critical treatment of such subjects as land settlement and colonization, land booms and depressions, land valuation and assessment, land price movements and rents. Economic land holding and economic land utilization are studied from individual, state and national viewpoints. (*Land Economics*—Ely and Wehrwein.)

Mr. Aull

Ag. Ec. 45—Farm Accounting—Semester 1 (2 and 2) 2 2/3 cr.

Prerequisite: Ag. Ec. 22.

Purpose: To understand the fundamental principles of accounting adapted to the farm business, and to make application of accounting data to farm management. *Principal Topics*: A critical study is made of different types of accounts. The forms of accounts best suited to varying conditions, such as farms of different sizes and types, are then decided on. Actual practice in record-keeping begins with simple operations such

as the inventory, the cash-book and ledger. Students finally carry through a full set of farm accounts. (*Keeping and Using Farm Records*—Hopkins.)

Mr. Mills Mr. Guin

Ag. Ec. 46—Farmers' Movements—Semester 2 (3 and 0) 3 cr.

Prerequisite: Ag. Ec. 22, 31.

Purpose: To give the student a view of the efforts of farmers to organize for the improvement of agriculture and other rural concerns. *Principal Topics*: Beginning with the first local agricultural society, the development of this movement is followed through the period of the Civil War. After 1865, the Grange, Farmers' Alliance, etc., are studied in their chronological order.

Mr. Mills

Ag. Ec. 47—Farm Problems—Semester 1 (2 and 0) 2 cr.

Purpose: To familiarize the student with the practical problems confronted under various conditions that obtain in different sections of South Carolina. *Principal Topics*: The problems to be taken from experiences of farmers, county agents and specialists in adjusting farm practices to varying conditions of organization, soil types, climate, etc.

Mr. Patrick

Ag. Ec. 51, 52—Seminar—Semester 1 and 2 (1 and 0) 1 cr. each semester.

Prerequisite: Senior standing and major in Agricultural Economics.

Purpose: To acquaint the student with the relation of economics and sociology to specific problems. *Principal Topics*: Each student will select some problem for intensive study and the various problems selected will be discussed in their relation to each other and to the current situation.

Staff

ANIMAL HUSBANDRY

Mr. Starkey Mr. Ritchie

A. H. 12—Types, Breeds and Market Classes of Livestock—Semester 2 (3 and 2) 3 2/3 cr.

Purpose: To give the agricultural students a knowledge of the characteristics and uses of farm animals. *Principal Topics*: Types, breeds and market classes of beef cattle, horses, mules, sheep and swine. In laboratory the judging of farm animals is given considerable emphasis. (*Types and Market Classes of Livestock*—Vaughan.)

Mr. Ritchie

A. H. 31. Feeds and Feeding—Semester 1 (2 and 2) 2 2/3 cr.

Prerequisite: A. H. 12 and Chemistry 21.

Purpose: To give the student an understanding of the principles of feeding farm animals. *Principal topics*: A study of nutrients, digestion and metabolism of feed stuffs. A study of nutritive ratios and feeding standards. The balancing of rations. (*Feeds and Feeding*—Henry and Morrison.)

Mr. Ritchie

A. H. 32—Judging—Semester 2 (0 and 2) 2/3 cr.

Prerequisite: A. H. 12.

Purpose: To give advanced students an opportunity to become more proficient in judging livestock. *Principal topics*: Judging cattle, horses, mules, sheep and swine. Classes of livestock are studied and placed and reasons given for the placings.

Mr. Ritchie

A. H. 33—Live Stock Management—Semester 1 (2 and 2) 2 2/3 cr.

Purpose: To give students training in the fundamentals of live stock management. *Principal topics*: Dehorning, halter making, rope splicing, grooming for show, treatment for parasites, shearing.

Mr. Starkey Mr. Ritchie

A. H. 34—Pork Production—Semester 2 (2 and 2) 2 2/3 cr.

Prerequisite, Required: A. H. 31.

Purpose: To give the students a thorough knowledge of the fundamentals of pork production. *Principal Topics*: Feeding and management of hogs at different weights and ages. Forage crops, protein cupplements, preparation of feeds, methods of feeding, relative value of feeds, summer and winter management, buying and selling. (*Pork Production*—Smith.)

Mr. Starkey

A. H. 35—Farm Meats—Semester 1 (0 and 6) 2 cr.

Prerequisite: A. H. 12.

Purpose: The proper selection and killing of meat animals and the cutting and curing of farm meats. *Principal Topics*: Production, selection, slaughtering, cutting, curing, judging and consumption of farm meats. (*Meat and Meat Products*—Tomhave.)

Mr. Ritchie

A. H. 40—Animal Breeding—Semester 2 (2 and 2) 2 2/3 cr.

Prerequisite: Dairy 32 or Agronomy 32.

Purpose: To give the student an understanding of the fundamental principles relative to the breeding and improvement of livestock. *Principal Topics*: Variation, heredity, selection, linebreeding, in-breeding, cross-breeding, breed analysis, and other correlated subjects. (*Breeding and Improvement of Farm Animals*—Rice.)

Mr. Starkey

A. H. 41—Animal Nutrition—Semester 1 (2 and 0) 2 cr.

Prerequisite: A. H. 31.

Purpose: To give the student a working knowledge of all feeds used for livestock production. *Principal Topics*: Study of the relative values of feeds used in the production and maintenance of cattle, horses, sheep and swine. A study of the analysis and digestibility of the nutrients in feed stuffs and their adaptibility to livestock feeding. (*Feeds and Feeding*—Henry and Morrison.)

Mr. Starkey

A. H. 42—Sheep Production—Semester 2 (2 and 2) 2 2/3 cr.

Prerequisite: A. H. 31.

Purpose: To give the students training relative to the feeding and management of sheep. *Principal Topics*: Feeding, breeding, management, judging, shearing blocking, and sanitation. (*Productive Sheep Husbandry* —Coffey.)

Mr. Ritchie

A. H. 43—Beef Production—Semester 1 (2 and 2) 2 2/3 cr.

Prerequisite: A. H. 31.

Purpose: To familiarize the student with the principles of breeding, feeding and management of beef cattle in the United States and foreign countries. *Principal Topics*: Early History of beef production. Beef production in foreign countries. Relation of beef production to general farming. Most profitable feeds for beef production. Methods of breeding to improve beef cattle. Management of the purebred herd. (*Beef Production*—Snapp.)

Mr. Starkey

A. H. 52—Seminar—Semester 2 (2 and 0) 2 cr.

Prerequisite: A. H. 31.

Purpose: To teach the student how to make use of the library and keep informed as to the latest findings of the experiment stations. *Principal Topics*: Timely topics are selected which have a bearing on the work which is being conducted at the various experiment stations. Each student summarizes the data on his particular problem and presents it to the group which is taking the course.

Mr. Starkey

ARCHITECTURE

Mr. Lee
Mr. Anderson Mr. Little Mr. Hodge Mr. Klugh

Arch. 11, 12—Elements of Architecture—Semester 1 (0 and 6) 2 cr. Semester 2 (0 and 4) 1 1/3 cr.

Purpose: To give the beginner in architecture a basic foundation for later work in design. This is a practical orientation course in the rudiments of architecture. *Principal Topics*: The orders of architecture; lettering; basic composition, rendering, doors, windows, pediments, arches, etc. (*Vignola,* Pierre Esquie.)

Arch. 13, 14—Freehand Drawing—Semester 1 and 2 (0 and 4) 1 1/3 cr.

Purpose: To give the student a thorough working knowledge of the principles of both angular and parallel perspective—the perspective of circles and shading. *Principal Topics*: Study of mass, form, proportion and value with the mediums of pencil and charcoal. A sketching technique is stressed.

Mr. Hodge

Arch. 15—Descriptive Geometry—Semester 1 (0 and 2) 2/3 cr.

Prerequisite: Entrance to Freshman class.

Purpose: To develop the powers of visualization and imagination. *Principal Topics*: Points, lines, planes, intersections, sections. Solutions on drafting board. (*Practical Descriptive Geometry*—D. A. Low).

Mr. Klugh

Arch. 16—Shades and Shadows and Perspective—Semester 2 (0 and 2) 2/3 cr.

Prerequisite: Architecture 15.

Purpose: To create in the student's mind correct form and proportion by application of conventional shades and shadows and principles of perspective. *Principal Topics*: Drafting board practice in casting of

Shades and Shadows on architectural forms and principles of architectural perspective. (*Shades and Shadows for Architects*—Buck, Ronan and Oman.)

Mr. Klugh

Arch. 21—Architectural Design—Semester 1 (0 and 14) 4 2/3 cr.

Prerequisite, Required: Arch. 12, 14, 15, 16.

Purpose: By means of analytical problems to introduce the student to the basic principles of design inherent in the smaller elements of architecture. *Principal Topics*: Proportions; relative values of three dimensional mass; relation of lesser elements and decorative detail to the larger forms, in respect to mass and pattern; design of windows, doors, porticoes, arches, the Orders, together with analysis of detail of mouldings; carried out in rendered problems of from two to five weeks duration. Rendering: building out of masses; focus of attention.

Mr. Anderson

Arch. 22—Architectural Design—Semester 2 (0 and 14) 4 2/3 cr.

Prerequisite, Required: Arch. 21.

Purpose: Continuation of Arch 21; with a gradual working toward small problems in planning in preparation for Arch. 31. *Principal Topics*: Continuation of Arch. 21; planning as a problem in three dimensional space; elementary exercises in spatial requirements of windows, doors, stairs, roofs, bath rooms, closets, fireplaces, etc., carried out in rendered problems of from two to five weeks duration.

Mr. Anderson

Arch. 23, 24—Antique and Color—Semesters 1 and 2 (0 and 3) 1 cr.

Prerequisite, Required: Arch. 14.

Purpose: To give a thorough drill in the drawing of simple casts of architectural fragments, parts of the figure and still life groups. *Principal Topics*: Elements of decorative composition, still life groups in monochrome and color. Sketching in water color, pastel and charcoal. Out door sketching.

Mr. Hodge

Arch. 23.5, 24.5—Decorative Design and Color—Semesters 1 and 2 (0 and 3) 1 cr.

Prerequisite: Arch. 14.

Purpose: To give the student majoring in Weaving and Designing the fundamentals of form, shade, and color underlying the design of

decorative textiles. *Principal Topics*: Pencil Sketching, Charcoal drawing from models; Casts and nature; adaptation of natural and conventional forms to decorative design as applied to textile fabrics; Study of color in theory and practice; Water color renderings.

Mr. Hodge

Arch. 25—History of Architecture—Semester 1 (4 and 0) 4 cr.

Purpose: To acquaint the student with the development of architecture, from prehistoric to mediaeval time, as a problem both of construction and aesthetics. *Principal Topics*: Influence of various geographic, geological, social and psychological factors; structural problems and their solution, post and lintel, arch, vault, pendentive, dome; planning problems and their solution, temples, churches, public buildings; decorative problems and their solution; as revealed in the buildings of the Egyptian, Greek, Roman, Early Christian, Byzantine and Romanesque periods.

Mr. Anderson

Arch. 25.5—Architecture of Antique and Early Christian Civilizations—Semester 1 (2 and 0) 2 cr.

Purpose: An elective course to present, as cultural background, a brief, non-technical synopsis of architecture as it developed in the earlier civilizations of western Europe. *Principal Topics*: While in general this course covers the material of Arch. 25, the lectures will be less concentrated and will be given from the lay rather than the architectural point of view. Emphasis will be placed not on specific buildings, but on types of buildings evolved by the different civilizations. Architecture in the Egyptian, Greek, Roman and Early Christian civilizations.

Mr. Anderson

Arch. 26—History of Architecture—Semester 2 (4 and 0) 4 cr.

Prerequisite, Required: Arch. 25.

Purpose: To acquaint the student with the development of architecture, from mediaeval to modern time, as a problem both of construction and aesthetics. *Principal Topics*: Influence of various geographic, geological, social and psychological factors; the spread of the Romanesque system of building through western Europe, and its crystallization in Gothic architecture; the revival of Classic form in Italy during the Renaissance; the spread of the Renaissance into France and England; nineteenth century eclecticism, and the beginnings of modern architecture.

Mr. Anderson

Arch. 26.5—Architecture of Mediaeval and Renaissance Civilizations—Semester 2 (2 and 0) 2 cr.

Purpose: An elective course to present, as cultural background, a brief, non-technical synopsis of architecture as it developed in the later civilizations of western Europe. *Principal Topics*: Architecture of the mediaeval and renaissance civilizations of Italy, France and England. No prerequisite is required, but in as much as the forms of both mediaeval and renaissance architecture are either wholly or in part rooted in earlier developments, the first half-dozen lectures will be devoted to uncovering the roots before proceeding with the material of the course.

Mr. Anderson

Arch. 28—Summer Work—6 Weeks.

Purpose: To give the student an insight into the practical side of the profession, a better appreciation of the objectives in his college work and to enable him to secure better employment upon graduation. *Principal Topics*: Any duties connected with an architect's office or on construction work with a contractor, or making measured drawings of some building of good architectural character approved by the faculty of architecture. The student is expected to do this without remuneration if necessary.

Mr. Lee

Arch. 31, 32—Architectural Design—Semesters 1 and 2 (0 and 22) 7 1/3 cr.

Prerequisite, Required: Arch. 22.

Purpose: To acquaint the student with problems involving planning, elevation, and mass composition in all styles of architecture. *Principal Topics*: The formal plan problem of public buildings; studies in entourage, elements of landscape architecture with relation to plan and elevation, interior architecture, indication and presentation. The esquisse-esquisse.

Mr. Little Mr. Anderson

Arch. 31-A—Theory of Architecture—Semester 1.—(Given jointly as part of Arch. 31).

Prerequisite: Registration in Architecture 31.

Purpose: An open period where all topics relating to architecture are brought up for discussion. Seminar. *Principal Topics*: Formal discussion of the theory of design. Axial relationships, mosaic, circulation, requirements of type buildings, etc. Informal discussion of new theories of design and style, competitions and exhibitions.

Mr. Little

Arch. 33, 34—Cast Drawing—Semesters 1 and 2 (0 and 3) 1 cr.

Prerequisite, Required: Arch. 24.

Purpose: An advanced course in the representation of antique sculpture to show the elements of anatomy and its relation to form. *Principal Topics*: Drawing from casts with a choice of mediums such as charcoal, conte, pastel, etc. Outdoor sketching in pencil and water color.

MR. HODGE

ARCH. 33.5—DECORATIVE DESIGN AND COMPOSITION—Semester 1 (0 and 3) 1 cr.

Prerequisite: Arch. 24.5.

Purpose: To give the student majoring in Weaving and Designing advanced training in the composition of textile patterns. *Principal Topics*: Composition of border patterns; geometric bases for all-over repeating designs; designing for damasks, brocades, tapestries, rugs, etc.

MR. HODGE

ARCH. 35, 36—BUILDING CONSTRUCTION—Semester 1 (3 and 0) 3 cr. Semester 2 (2 and 0) 2 cr.

Purpose: To give the student a knowledge of the materials that enter into the construction of a frame building, their qualities and uses. *Principal Topics*: Growth of wood, house framing, roofing, door and window details, flooring, plastering, interior and exterior finish, painting, chimney construction, hardware, estimating, specification writing, problems in calculation. (*Materials and Methods of Architectural Construction*—Gay and Parker.)

MR. LEE

ARCH. 37, 38—WORKING DRAWINGS—Semesters 1 and 2 (0 and 2) 2/3 cr.

Prerequisite, Required: Architecture 32.

Purpose: The student is required to make complete working drawings of a frame building just as the practicing architect does in his office. *Principal Topics*: Scale drawings of plan of each floor, foundation and roof; elevation of each side of building; large scale details of framing, doors, windows, trim, stairs, cornice, roof and chimney. Calculations. Tracing. Blueprinting.

MR. LEE

ARCH. 39—HISTORIC ORNAMENT—Semester 1 (0 and 2) 2/3 cr.

Prerequisite, Required: Arch. 22, 24, 26.

Purpose: To acquaint the student with the development, from prehistoric to modern time, of architectural ornament. *Principal Topics*: Carved and painted ornament; mosaic pavements; painted wall decora-

tion; stained glass; decoration of vaults and ceilings; interior decoration; as developed in Egyptian, Greek, Roman, Mediaeval and Renaissance architecture. After a brief analysis of each phase, the student is required to submit a small rendered plate of the particular ornament under consideration.

Mr. Anderson

Arch. 40, 49—Life Drawing—Semesters 1 and 2 (0 and 2) 2/3 cr.

Prerequisite, Required: Arch. 34.

Purpose: To acquaint the student with the proportion and anatomy of the nude and draped figure. Designed primarily for architectural students. *Principal Topics*: Quick sketches of the nude for action and movement. Longer studies of the nude and draped figure for tone values, composition and light effects. Charcoal as a medium.

Mr. Hodge

Arch. 40.5—History of Painting—Semester 2 (2 and 0) 2 cr.

Prerequisite: Open to all Juniors and Seniors.

Purpose: Stressing the appreciation of painting through the various national styles. *Principal Topics*: Pre-historic painting; Egyptian and Greek painting. The renaissance in Italy, the Netherlands, and France. The German, Spanish, and English Schools. The American School. The International style and abstract art. Illustrated with slides and mounted reproductions. (*University Prints.*)

Mr. Little

Arch. 41, 42—Architectural Design—Semester 1 (0 and 20) 6 2/3 cr. Semester 2 (0 and 21) 7 cr.

Prerequisite, Required: Arch. 32.

Purpose: To present architectural problems of an advanced nature. *Principal Topics*: The complex plan, multi-storied elevation, elements of civic planning, advanced archaeology problems, the esquisse-esquisse, advanced landscape architecture.

Mr. Little Mr. Anderson

Arch. 41.5—Art Appreciation—Semester 1 (2 and 0) 2 cr.

(For students in Industrial Education—Elective).

Purpose: To create in the student an artistic taste and to direct and instruct it by bringing him in contact with the best examples. *Principal Topics*: Periods and styles of architecture, painting, sculpture, furniture,

ornament, decorative and interior composition, given by lectures and lantern slides.

STAFF

ARCH. 42.5—INDUSTRIAL DESIGN—Semester 2 (0 and 2) 2/3 cr.

(For students in Industrial Education).

Prerequisite, Required: Drawing 12 and 14, Architecture 41.5.

Purpose: To give the students the fundamentals in design of simple pieces of furniture as worked out on the drafting table. *Principal Topics*: Working detail drawings of chairs, tables, metal work, etc.

MR. LEE

ARCH. 43, 44—BUILDING CONSTRUCTION—Semesters 1 and 2 (3 and 0) 3 cr.

Prerequisite: Arch. 36.

Purpose: To give the student a working knowledge of the nature, quality and uses of materials in a masonry building. *Principal Topics*: Foundations, mortars, details of masonry construction, steel, concrete, fireproof construction, estimates, specifications, superintendence, calculations.

MR. LEE

ARCH. 45, 46—STRUCTURAL DESIGN—Semester 1 (0 and 6) 2 cr. Semester 2 (0 and 8) 2 2/3 cr.

Prerequisite: Architecture 38.

Purpose: To train the student to make working drawings of a masonry building with specifications, including mechanical plant, as usually prepared in the practicing architect's office *Principal Topics*: Scale drawings of all floor plans and elevations, cross sections; large scale details of all parts of the construction with necessary calculations; specification writing; estimating; completed documents are to be in approved shape so that they may be submitted to a contractor for a bid.

MR. LEE

ARCH. 47—MECHANICAL PLANT—Semester 1 (2 and 0) 2 cr.

Prerequisite, Required: Architecture 38.

Purpose: To familiarize the student with the design and requirements of heating, lighting and sanitary systems in a building. *Principal Topics*: Hot air, hot water and steam systems of heating, electric lighting, plumbing for supply and drainage, ventilation. Layout of these systems is required on drawings made in Architecture 38 or 45.

MR. LEE

ARCH. 48—PROFESSIONAL PRACTICE—Semester 2 (1 and 0) 1 cr.

(For seniors in Architecture only).

Purpose: To familiarize the student with methods of practice of architecture and inculcate in him high ideals of ethics of the profession. *Principal Topics*: Office management and organization, laws, codes, contracts, ethics, competitions. Documents of the American Institute of Architects are studied.

MR. LEE

ARCH. 51, 52—ADVANCED ARCHITECTURAL DESIGN—Semester 1 and 2 (credits to be arranged with instructor).

Prerequisite, Required: Arch. 42.

Purpose: A continuation of Arch. 42 with more advanced work, as an elective to advanced students meeting the prerequisite. *Principal Topics*: The student writes his own program of the project. Scheduled criticism periods and personal presentation to the architectural faculty for judgment at the end of each semester.

MR. LITTLE

ARCH. 53—MODELING—Semester 1 (0 and 2) 2/3 cr.

Prerequisite, Required: Arch. 12, 14, 15, 16—Elective.

Purpose: To give the student studies in three dimensional representation in a plastic medium. *Principal Topics*: Bas-relief placques. The human figure in relief and in the round. Decorative compositions in bas-relief and in the round. Advanced anatomy of the human figure and animal forms.

MR. HODGE

BOTANY AND BACTERIOLOGY

MR. ARMSTRONG
MR. AULL MR. COCKRELL MR. ROSENKRANS MR. RICE

BOT. 11—GENERAL BOTANY—Semester 1 (2 and 4) 3 1/3 cr.

Purpose: To give a general survey of the principles manifest in the life of plants. *Principal Topics*: The first part of the semester is devoted to a study of the form, structure and physiology of the higher plants, followed by a study of algae, bacteria, fungi, liverworts, mosses, with the application of biological laws. Descriptions, life histories and the adaptation of the representative organisms are considered. (*Botany—Principles and Problems*—Sinnott.)

MR. ROSENKRANS MR. RICE

Bot. 13—Agricultural Botany—Semester 1 (2 and 2) 2 2/3 cr.

Purpose: To give the students knowledge of the different plant organs and their uses. *Principal Topics*: The structure and functions of the various parts of the higher seed plants and the broad principles of metabolism, growth, and reproduction are first taken up, followed by a study of the lower organisms. (*Botany With Agricultural Applications*—Martin.)

Mr. Rosenkrans Mr. Rice

Bot. 14—Agricultural Botany—Semester 2 (2 and 4) 3 1/3 cr.

A continuation of course 13, dealing with the changes in form, structure, and methods of reproduction from the lower to the higher forms of plants. The latter part of the semester is devoted to systematic botany. (*Field, Forest, and Garden Botany*—Gray.)

Mr. Rosenkrans Mr. Rice

Bot. 30—Plant Physiology—Semester 2 (2 and 4) 3 1/3 cr.

Prerequisite: Botany 11 or 13; one year of chemistry, and one semester of physics.

Purpose: To study all the relations and processes which have to do with the maintenance, growth, and reproduction of plants. *Principal Topics*: Absorption of matter and energy, water relations of the plant, utilization of reserve products and liberation of energy, growth, movement, and reproduction.

Mr. Armstrong Mr. Rice

Bot. 41—Field Crop Diseases—Semester 1 (2 and 2) 2 2/3 cr.

Prerequisite: Botany 11 or 13; suggested Botany 30.

Purpose: To give a knowledge of the common field crop diseases and methods for their control. *Principal Topics*: Historical background, fungicides, insects as disseminators of disease, types of organisms causing disease, symptoms, effect upon host plants, and control of the common field crop diseases.

Mr. Armstrong

Bot. 43—Orchard and Truck Crop Diseases—Semester 1 (2 and 2) 2 2/3 cr.

Prerequisite: Botany 11 or 13; suggested Botany 30.

Purpose: To study the diseases of fruits and vegetables, and methods for their control. *Principal Topics*: Historical background, fungicides, insects as disseminators of disease, symptoms, effect upon host plants, and

control of diseases of fruits and vegetables. (*Manual of Vegetable Garden Diseases*—Chupp; *Manual of Fruit Diseases*—Hesler and Whetzel.)

Mr. Armstrong

Bot. 101—Morphology of the Fungi—Semester 1 (2 and 2) 2 2/3 cr. (Hours to be arranged.)

Prerequisites: Botany 13 and 14.

A study of the morphology and taxonomy of the fungi with practice in pure culture isolation and growth of parasitic forms.

Mr. Armstrong

Bact. 31—General Bacteriology—Semester 1 (2 and 4) 3 1/3 cr.

Prerequisite, Required: Botany 21 and 22, Chemistry 11 and 12. *Suggested*: Chemistry 21 or Chemistry 25 and 26.

Purpose: To give the student a clear working knowledge of the fundamentals of bacteriology. *Principal Topics*: Morphology, classification, distribution, cultivation, observation, and physiology of microorganisms; effects of organisms on their environment; microorganisms and health. (*Bacteriology*—Buchanan; *Laboratory Technique In Bacteriology*—Levine.)

Mr. Aull

Bact .40—Dairy Bacteriology—Semester 2 (2 and 3) 3 cr.

Prerequisite, Required: Bacteriology 31.

Purpose: To give the student a detailed knowledge of bacteriology in its relation to the dairy industry. *Principal Topics*: Bacterial counts on milk, milk fermentations, contamination of milk and cream, reducing the contamination of milk, growth of microorganisms in milk and cream, body cells in milk, spread of diseases through milk and its derivatives; preservation of milk and cream, milk enzymes, bacteriology of prepared milks, ice cream, butter cultures, fermented milks, butter, cheese, tests for the quality of milk and cream. (*Dairy Bacteriology*—Hammer; *Standard Methods of Milk Analysis and Mimeographed Notes.*)

Mr. Aull

Bact. 42—Sanitary Bacteriology—Semester 2 (2 and 3) 3 cr.

Prerequisite, Required: Chemistry 11 and 12.

Suggested: Botany 11 or 13 and Organic Chemistry.

Purpose: This course is designed primarily for Engineering students. After a consideration of the fundamentals of bacteriology, the course is designed to give a knowledge of the relation of bacteriology to water purification and sewage disposal. *Principal Topics*: Morphology, classification, physiology, and cultivation of microorganisms; the bacteria in natural waters, the location and protection of water supplies, water borne

diseases, algae and their relation to water supplies, the Colon-Typhoid group of bacteria, the bacteriological examination of water and sewage, the purification of water, operation of control laboratories, bacteriological control of swimming pools, the bacteriology of sewage and sewage effluents and methods of sewage disposal. (*Elements of Water Bacteriology*—Prescott & Winslow; *Water Purification Control*—Hopkins; *Lectures and Technical Papers; Standard Methods for the Examination of Water and Sewage of the A. P. H. A.*, and *Mimeographed Notes.*)

MR. AULL

BACT. 44—SOIL MICROBIOLOGY—Semester 2 (2 and 3) 3 cr.

Prerequisite, Required: Bacteriology 31.

Purpose: To give the student accurate knowledge of the importance of microorganisms in the maintenance of soil fertility. *Principal Topics*: The soil and the plant, the microbe and its activities, the soil population, the role of microbes in the decomposition of organic substances, transformation of nitrogen, transformation of mineral substances in soil by the action of microorganisms, interrelationships between higher plants and soil microorganisms, modification of the soil population, importance of microbes in soil fertility. (*Soil and the Microbe*—Waksman and Starkey; *Laboratory Manual of General Microbiology*—Fred and Waksman.)

MR. AULL

FORESTRY 22—OUTLINE OF FORESTRY—Semester 2 (2 and 2) 2 2/3 cr.

Prerequisite: Bot. 11 or 13.

Purpose: To cover the general principles of forestry. *Principal Topics*: History of forestry, importance of forestry in a planned land economy, forest practice, stressing the administration, management, protection and utilization of forest resources.

MR. COCKRELL

Note: Other courses in Forestry will be announced shortly after January 1, 1935.

CHEMISTRY

MR. BRACKETT

MR. LIPPINCOTT MR. MITCHELL MR. POLLARD
MR. HUNTER MR. CARODEMOS MR. ZURBURG

CHEM. 11, 12—GENERAL CHEMISTRY—Semesters 1 and 2 (3 and 2) 3 2/3 cr.

Purpose: To give the student a general knowledge of the fundamentals of the science of chemistry, through lectures, lecture experiments and laboratory exercises: *Principal Topics*: A consideration of the basic laws of chemistry and a study of the preparation and properties of the common

substances. (*Elementary Study of Chemistry*—McPherson and Henderson; *Laboratory Manual, Exercises in General Chemistry*—Pollard.)

Mr. Hunter Mr. zurBurg

Chem. 21, 22—Agricultural Chemistry—Semesters 1 and 2 (2 and 2) 2 2/3 cr.

Prerequisite, Required: Chemistry 11, 12.

Purpose: To acquaint the student with the tremendous role chemistry has played and is playing in the development of modern agriculture. *Principal Topics*: To familiarize the student with agricultural problems of chemical nature, such as those involved in soils, fertilizers, seeds, insecticides and fungicides, foods and feeds. The laboratory work is designed to give the student adequate training in technique and methods so that he may fully appreciate the value of analytical data and stimulate his interest in further chemical work.

Mr. Carodemos

Chem. 23—Qualitative Analysis—Semester 1 (2 and 8) 4 2/3 cr.

Prerequisite, Required: Chemistry 11, 12.

Purpose: To emphasize the principles involved in chemical analysis, to broaden the student's knowledge of inorganic chemistry, to develop deductive reasoning power, and to give practice in manipulation. *Principal Topics*: Solutions and ionization; mass action and the law of chemical equilibrium; solubility product principle; hydrolysis, amphoterism. complex ions; gaseous-liquid and liquid-liquid systems; reactions and equations. The laboratory work consists of analysis of unknown salt mixtures, industrial products and alloys. (*Qualitative Analysis*—Engelder.)

Mr. Lippincott

Chem. 24—Quantitative Analysis—Semester 2 (2 and 8) 4 2/3 cr.

Prerequisite, Required: Chemistry 11, 12.

Purpose: To give training for the more advanced work and the time is spent on simple quantitative analyses, both volumetric and gravimetric, which are typical of the subdivisions of the subject. *Principal Topics*: Volumetric analysis; gravimetric analysis; concentration of solutions; acidimetry and alkalimetry; oxidation and reduction, iodimetry; theory of electrolysis; assaying; stoichiometry. The laboratory work consists of the preparation of decinormal solutions; analysis of soda ash, sulphate, chloride, pyrolusite, iron ore, bleaching powder, silver coin, and limestone. (*Quantitative Analysis*—Engelder; *Laboratory Manual of Introductory Quantitative Analysis*—Nichols.)

Mr. Lippincott

Chem. 25—Organic Chemistry—Semester 1 (3 and 2) 3 2/3 cr.

Prerequisite, Required: Chemistry 11, 12.

Purpose: This is an extensive course in which the general principles of organic chemistry and the properties of important compounds receive thorough discussion. *Principal Topics*: Hydrocarbons of the methane, ethylene, and acetylene series; saturated, unsaturated and polyhydroxy alcohols; monobasic and polybasic acids; ethers, anhydrides and esters; aldehydes and ketones; amines and amides; cyanogen and related compounds; halogen compounds; compounds containing two unlike substituents; carbohydrates; compounds containing phosphorus, arsenic, sulphur and metals. (*Organic Chemistry*—Norris; *Laboratory Experiments in Organic Chemistry*—Adams and Johnson.)

Mr. Lippincott

Chem. 26—Organic Chemistry—Semester 2 (3 and 2) 3 2/3 cr.

Prerequisite, Required: Chemistry 25.

Purpose: Same as Chemistry 25. *Principal Topics*: The identification of organic compounds and the determination of their structure; uric acid and related compounds; cyclic hydrocarbons; determination of the structure of aromatic compounds; nitro compounds and sulphonic acids; aromatic amines, nitro compounds and sulphonic acids; aromatic phenols, ethers, acids, aldehydes and ketones; aromatic compounds containing two unlike substituents. (*Organic Chemistry*—Norris; *Laboratory Experiments in Organic Chemistry*—Adams and Johnson.)

Mr. Lippincott

Chem. 31, 32—Physical Chemistry—Semesters 1 and 2 (3 and 4) 4 1/3 cr.

Prerequisite, Required: Chemistry 11, 12; Chemistry 22 or 24; *Suggested*: Organic Chemistry; Calculus.

Purpose: The systematic presentation of modern chemical theories of matter, solutions and reactions. *Principal Topics*: Gases, liquids and solids; atomic structure; thermochemistry; theory of solutions; chemical kinetics; equilibrium in homogeneous and heterogeneous systems; the Phase Rule; elementary electro-chemistry. Laboratory determinations of physico-chemical properties and laboratory studies of the topics listed. (*Elements of Physical Chemistry*—Bell and Gross; *Laboratory Outline of Physical Chemistry*—Briggs.)

Mr. Pollard

Chem. 33, 33a—Quantitative Analysis—Semesters 1 and 2 (0 and 4) 1 1/3 cr.

Prerequisite, Required: Chemistry 24.

Purpose: To give further training and experience in quantitative chemical analysis through lectures and laboratory work. This course in-

volves both gravimetric and volumetric analysis. *Principal Topics*: Complete analysis of clays, silicates, a partial analysis of coal, pig iron and steel. Volumetric analysis includes the determination of arsenic, copper and lead in insecticides. Quantitative analysis of alloys, including some quantitative electrometric separations. (*Quantitative Analysis*—Mahin.)

Mr. Mitchell

Chem. 34—Gas and Fuel Analysis—Semester 2 (0 and 2) 2/3 cr.

Prerequisite, Required: Chemistry 24.

Principal Topics: A course consisting of the analysis of various gases and mixtures of gases, such as coal gas, flue gas, natural gas, air and others. (*Gas Analysis*—Dennis.)

Mr. Lippincott

Chem. 35—Organic Chemistry—Semester 1 (2 and 2) 2 2/3 cr.

Prerequisite, Required: Organic Chemistry 25 and 26.

Purpose: To review and study more intensively certain special topics in organic chemistry. *Principal Topics*: Aliphatic compounds; aromatic compounds; dyes; terpenes; camphors, heterocyclic compounds; proteins. The laboratory work is devoted to a study of qualitative organic analysis. (*Organic Chemistry*—Perkin and Kipping; *Qualitative Organic Analysis*—Kamm.)

Mr. Lippincott

Chem. 36—Organic Chemistry—Semester 2 (2 and 2) 2 2/3 cr.

(Elective second semester).

Prerequisite, Required: Organic Chemistry 35.

Purpose: Same as Chemistry 35. *Principal Topics*: A continuation of topics listed in Chemistry 35. The laboratory work is given over to quantitative organic analysis. (*Organic Chemistry*—Perkin and Kipping; *Qualitative Organic Analysis*—Kamm.)

Mr. Lippincott

Chem. 37, 37a—General Biochemistry—Semesters 1 and 2 (2 and 0) 2 cr. (Elective second semester).

Prerequisite, Required: Chemistry 23, 24, 25; *Suggested*: Chemistry 31.

Purpose: To give a comprehensive outlook and an acquaintance with the broader aspects of biochemistry. This course is of particular value

to the pre-medical, pre-dental and agricultural student. (*Introduction to Biochemistry*—Williams.)

Mr. Carodemos

Chem. 38—Dairy Chemistry—Semester 2 (2 and 4) 3 1/3 cr.

Prerequisite, Required: Chemistry 21, 22; *Suggested*: Chemistry 23, 24, 25.

Purpose: A study of chemistry in its relation to the dairy industry. *Principal Topics*: Acquainting the student with the manipulation of apparatus found in the modern dairy laboratory; analyses of milk and dairy products; detection of adulterants, preservatives, colors and causes of spoilage of dairy products. (References.)

Mr. Carodemos

Chem. 41, 42—Inorganic Chemistry—Semesters 1 and 2 (2 and 0) 2 cr.

Prerequisite, Required: Chemistry 11, 12; *Suggested*: Chemistry 31, 32.

Purpose: A comprehensive survey of the field of inorganic chemistry through lectures and lecture experiments. *Principal Topics*: Development of modern theories of valence and allied subjects and a detailed study of the elements and their compounds, based on the periodic system and including both well-known and rarer elements. (*Systematic Inorganic Chemistry*—Caven and Lander.)

Mr. Hunter

Chem. 43, 44—Colloid Chemistry—Semesters 1 and 2 (2 and 0) 2 cr.

Prerequisite, Required: Chemistry 31, 32.

Purpose: The general theory of colloid chemistry and its applications. *Principal Topics*: Adsorption, contact catalysis, surface tension, preparation and properties of colloidal solutions, gelatinous precipitates and jellies, emulsions, foams, fog, smoke. (*Applied Colloid Chemistry*—Third edition—Bancroft.)

Mr. Pollard

Chem. 45—History of Chemistry—Semester 1 (2 and 0) 2 cr.

Prerequisite, Required: Chemistry 25, 26.

Principal Topics: A study of the development of the science of chemistry from the earliest times to the present day. (*History of Chemistry*—Moore.)

Mr. Brackett

CHEM. 46—STOICHIOMETRY—Semester 2 (2 and 0) 2 cr.

Prerequisite, Required: Chemistry 11, 12.

Purpose: To study various types of fundamental problems in chemistry through lectures and classroom work. *Principal Topics*: Balancing equations, principally oxidation and reduction reactions; gas law problems, atomic and molecular weights; factors; electrochemical problems; standard solutions; problems dealing with indirect analysis; calculations involving the elimination or introduction of a constituent; acidimetry and alkalinity; adjusting solutions to a desired normality and oxidation and reduction problems. (*Calculations of Quantitative Chemical Analysis*—Hamilton and Simpson.)

MR. MITCHELL

CHEM. 47—TECHNICAL ANALYSIS—Semester 1 (1 and 6) 3 cr.

Prerequisite, Required: Chemistry 24 or 33.

Purpose: To study the chemical principals involved, and give training and experience in the analysis of a great many industrial products. Special attention is given to the standard, accurate methods. *Principal Topics*: Fertilizer analysis, organic and mineral analysis of feeding materials; complete water analysis, both mineral and sanitary; the analysis of sugar products, special attention being given to the use of the polariscope in this work. (Methods of the Association of Official Agricultural Chemists.)

MR. MITCHELL

CHEM. 50—THESIS—Semester 2 (0 and 9) 3 cr.

Principal Topics: Original investigation of an assigned problem in some branch of chemistry selected by the student. This work may be carried out under the supervision of any qualified member of the staff. A thesis covering the work is a requirement of the course.

STAFF OF SCHOOL OF CHEMISTRY

CHEM. 52—ADVANCED LABORATORY PRACTICE—Semester 2 (0 and 3) 1 cr.

Prerequisite, Required: Chemistry 24 or 47.

Purpose: To give the student an opportunity to study certain lines of work not given in the regular analytical courses. *Principal Topics*: Mineral and vegetable oils, poison analysis, etc.

MR. MITCHELL

CHEM. 53, 54—INDUSTRIAL CHEMISTRY—Semesters 1 and 2 (2 and 0) 2 cr.

Purpose: To give the engineer an understanding of the chemical processes involved in industry and the chemistry student an understanding of the plant equipment. *Principal Topics*: Deals with the industrial aspects of fuels, combustion, and the chemical reactions which form the basis of the processes involved in commercial operations. The standard types of apparatus and the nature and sources of raw material are studied. In this introductory course a general survey of the field of industrial chemistry is obtained.

Staff of School of Chemistry

Chem. 55, 56—Elementary Chemical Microscopy—Semesters 1 and 2 (1 and 2) 1 2/3 cr.

Prerequisite, Required: Chemistry 23, 24, 25; Geology 33.

Purpose: To train the student in appreciating the value of the microscope in the industries. The microscope has come to be regarded as an indispensable adjunct in chemical-industrial operations where economy of time, labor and material is essential. *Principal Topics*: Theoretical consideration of the construction of optical instruments and their uses in chemical work. The laboratory work will include a study of the crystalline structure of common chemicals and their microscopic detection, determination of particle size and the solution of various practical industrial problems which can best be solved by the use of the microscope.

Mr. Hunter Mr. Carodemos

Chem. 58—Senior Problems—Semester 2 (0 and 9) 3 cr.

Prerequisite, Required: Senior standing in School of Chemistry.

Purpose: The course in Senior Problems will be given somewhat in the manner of a seminar. *Principal Topics*: The staff of the School of Chemistry will meet each week with the seniors. Each senior will be given a certain definite problem to be worked out in connection with certain members of the staff, these problems to be reported on at the weekly meetings. Recent advances in chemistry and chemical literature will receive attention.

Staff of School of Chemistry

CIVIL ENGINEERING

Mr. Clarke

Mr. Glenn Mr. Stevenson

C. E. 21, 22—Surveying—Semester 1 (2 and 4) 3 1/3 cr. Semester 2 (3 and 2) 3 2/3 cr.

Prerequisite: Math. 11, 12.

Purpose: To give the student considerable facility in the theory and use of modern surveying instruments and methods; in both field and office work. *Principal Topics*: Survey of tract and computation of area and description by Metes and Bounds; Differential and Profile Leveling and plotting; Topographic surveying and mapping. (*Davis, Foote and Rayner.*)

MR. CLARKE

C. E. 23—SURVEYING—Semester 1 or 2 (1 and 2) 1 2/3 cr.

Prerequisite: Math 11 and 12, Drawing 11 and 12.

Purpose: To give students not majoring in Civil Engineering practice in making preliminary surveys for and computing cost of engineering projects. *Principal Topics*: The use of surveying instruments, maps, profiles, cross-sections, land measurement, earth work computations, road location. (*Surveying*—Stevenson.)

MR. STEVENSON

C. E. 27, 28—MATERIALS AND METHODS OF CONSTRUCTION—Semester 1 and 2 (2 and 0) 2 cr. each semester.

Purpose: To familiarize the student with the common materials and technical terms used in construction; and the methods in which the materials are used. *Principal Topics*: Foundations on soft soils; Concrete, Brick and Stone Masonry; Wood, Steel and Reinforced Concrete Construction; Floor and Roof Coverings; Plastering and Painting; and Methods of Cost-keeping. (*Building Construction*—Huntington.)

MR. CLARKE

C. E. 30—SUMMER SURVEYING CAMP

Two weeks in June, at *Camp Clarke,* near Steedman, S. C., between the Sophomore and Junior years. 3 credits.

Prerequisite: C. E. 21, 22.

Purpose: To give civil engineering students experience, not only in camp organization and sanitation; but also in meeting field problems which arise in a rough country, several miles away from headquarters. *Principal Topics*: Reconnaissance, Preliminary Survey, and Final Location Survey, for a road between two selected termini; including plotting of map and profile of same. (See also C. E. 36).

MR. CLARKE

C. E. 31—MECHANICS—Semester 1 (3 and 0) 3 cr.

Prerequisite: Math 21, 22. Physics 24, 26 or Arch. 12.

Purpose: To enable the student to combine his knowledge of mathematics and physics for computing and analyzing balanced forces acting

on a point, a member, or a structure. The graphical method of solving problems in statics is also studied. *Principal Topics*: Components, Resultants, Reactions, Moments of forces, Center of Gravity, Moment of Inertia. (*Mechanics of Materials*—Young and Baxter.)

Mr. Stevenson

C. E. 32—Strength of Materials—Semester 2 (3 and 0) 3 cr.

Prerequisite: C. E. 31.

Purpose: To study the strength of brick, stone, concrete, wood and steel under the action of tensile, compressive, flexural and shearing stresses. The elastic theory is used throughout the course. *Principal Topics*: Compression, Tension, Shear, Modulus of Elasticity, Riveted Joints, Beams, Columns, Struts, Slabs. (*Strength of Materials*—Young and Baxter.)

Mr. Stevenson

C. E. 34—Graphic Statics—Semester 2 (1 and 2) 1 2/3 cr.

Prerequisite: C. E. 31.

Purpose: A study is made in this course of the most useful application of graphical analysis to stresses in structures. Stresses due to wind and dead weight on roof trusses are analyzed. The design for one roof truss is worked out in detail. *Principal Topics*: Types of Roof Trusses, Wind Loads, Dead Loads, Maxwell Diagrams, String Polygons, Built up Members, Column Formula. (*Stresses in Simple Structures*—Urquhart and O'Rourke.)

Mr. Stevenson

C. E. 35—Route Surveying—Semester 1 (3 and 0) 3 cr.

Prerequisite: C. E. 21, 22, 30.

Purpose: To familiarize the student with the special problems which arise in a survey for railroads, highways, canals, sewers, pipe lines and transmission lines. *Principal Topics*: Theory of simple, compound and reversed curves; transition spiral; railroad turnouts, computations of earthwork. (*Route Surveying*—Pickels and Wiley.)

Mr. Clarke

C. E. 36—Roads and Pavements—Semester 2 (3 and 3) 4 cr.

Prerequisite: C. E. 21, 22, 30.

Purpose: A study of the design, location, and construction of roads and pavements. *Principal Topics*: Economics of highway construction, location and design. Study of factors relating to highway construction, methods and materials.

The design period is devoted to the working up of detailed plans for a highway, using the notes taken in C. E. 30 at the Sophomore Summer Camp. (*Construction of Roads and Pavements*—Agg.)

Mr. Glenn

C. E. 37; 38—Structural Problems—Semester 1 (0 and 4) 1 1/3 cr. Semester 2 (0 and 6) 2 cr.

Prerequisite: Math 21, 22. Physics 24, 26. Drawing 25, 28.

Purpose: To study the elementary principles of design of culverts, piers, abutments, retaining walls, cranes, trusses and plate girders. Approximately the first half of the first semester is spent in computing quantities and costs of simple structures. *Principal Topics*: Quantity of concrete in a beam bridge with its abutments. Storage capacity of bins. Materials for a mile of road. Timber dam, forces acting on a retaining wall, stresses in bridge trusses, design of connections in a truss. Design of a plate girder. Cranes for handling ores. (*AISC Handbook of Steel Construction.*)

Mr. Stevenson

C. E. 41—Structural Design—Semester 1 (2 and 3) 3 cr.

Prerequisite: Drawing 25, 28—C. E. 31, 34; C. E. 32 or M. E. 51; C. E. 37; C. E. 38.

Purpose: Fundamentals of structural steel design. *Principal Topics*: The complete detailed design of a steel highway bridge, along with the economics of design. (*Stresses in Simple Structures*—Urquhart and O'Rourke. *Design of Steel Structures*—Urquhart and O'Rourke.)

Mr. Glenn

C. E. 42—Bridge Design—Semester 2 (2 and 6) 4 cr.

Prerequisite: C. E. 31; 34; 32 or M. E. 51; 37; 38; 41; 45.

Purpose: A study of the design and construction of reinforced concrete structures. *Principal Topics*: Economics and Design of Reinforced Concrete Buildings, Bridges, Piers, Abutments and Retaining Walls. (*Highway Bridges—Kirkham; Design of Concrete Structures*—Urquhart and O'Rourke.)

Mr. Glenn

C. E. 43, 44—Road Material Testing Laboratory—Semesters 1 and 2 (0 and 3) 1 cr.

Prerequisite: C. E. 32 and 36.

Purpose: Actual analysis and physical tests on construction materials. *Principal Topics*: Physical analysis and study of construction materials,

Portland cement, sand, concrete, etc. Special reference to Highway Materials both bituminous and non-bituminous. (*Highway Materials*—Bauer.)

MR. GLENN

C. E. 45—REINFORCED CONCRETE DESIGN—Semester 1 (2 and 3) 3 cr.

Prerequisite: C. E. 31; 34; 32 or M. E. 51.

Purpose: A study of theory and practice of reinforced concrete design. *Principal Topics*: Elements of Designs of Reinforced Concrete, beams, slabs, columns, footings, etc. (*Design of Concrete Structures*—Urquhart and O'Rourke.)

MR. GLENN

C. E. 46—MUNICIPAL AND SANITARY ENGINEERING—Semester 2 (5 and 0) 5 cr.

Prerequisite: C. E. 49.

Purpose: To familiarize the student with the procedure necessary to supply an adequate amount of potable water for public or private purposes; and the design and construction of sewerage systems and sewage treatment plants. *Principal Topics*: Quantity of water necessary, sources of supply, methods of utilizing source of supply, analyses, treatment of unpotable water, impounding reservoirs, pipe lines, methods of distribution, fire protection;—Amount of sewage, separate or combined sewerage systems, specific hydraulic problems arising in sewer design, manholes and other appurtenances, maintenance of sewers, disposal of sewage by dilution, and methods of treatment by sedimentation, septic tanks, Imhoff tanks, contact beds, trickling filters, intermittent sand filters, activated sludge, principles of irrigation by sewage. (*Public Water Supplies*—Turneaure & Russell. *Sewerage and Sewage Treatment*—Babbitt.)

MR. CLARKE

C. E. 47—REINFORCED CONCRETE DESIGN—Semester 1 (2 and 0) 2 cr.

Prerequisite: C. E. 31; 34; 32 or M. E. 51.

Purpose: To give students not majoring in Civil Engineering a working knowledge of the theory of reinforced concrete design. *Principal Topics*: Design of Reinforced Concrete Slabs, beams, girders, columns and foundations. (*Design of Concrete Structures*—Urquhart and O'Rourke.)

MR. GLENN

C. E. 48—CITY PLANNING—Semester 2 (2 and 0) 2 cr.

Prerequisite: Registration in Civil Engineering in either the Senior or Junior year. *Elective Course*: Offered only if the registration therein justifies.

Purpose: To acquaint the student with the special problems confronting a city engineer or city manager; not specifically of an engineering nature: but for the solution to which the public looks to the city officials. *Principal Topics*: Origin, growth and development of cities; streets and street systems; traffic control, railway and water traffic problems; airports; parks and playgrounds; zoning; legal problems involved. (*Principles of City Planning*—Lohmann.)

Mr. Clarke

C. E. 49—Hydraulics—Semester 1 (3 and 0) 3 cr.

Prerequisite: Math. 21, 22; Phys. 23-24-25-26.

Purpose: To acquaint the student with the behavior of water at rest or in motion. *Principal Topics*: Pressures exerted by water at rest; methods of measuring pressure; principles of water in motion; Bernoulli's theorem; measurement of water by orifices, weirs, nozzles, and Venturi meters; flow of water through short and long pipes; flow of water in open channels. (*Hydraulics*—Daugherty.)

Mr. Clarke

C. E. 50—Thesis—Semester 1 or 2. 1 or 2 credits. (3 credits for exceptional work.)

Civil Engineering students of exceptional ability, with the permission of the Head of the Civil Engineering Department, may choose as an elective, the preparation and submission of a thesis covering some phase of Civil Engineering. This thesis may be either an independent experimental investigation entered into with the hope of discovery of new engineering knowledge; or the independent prosecution of some already somewhat stabilized problem in engineering design. Those students who desire to submit a thesis, as a part of their free electives, must present to the Head of the Civil Engineering Department, not less than one month prior to the opening of the semester during which such thesis work is intended to be performed, a complete outline of the work contemplated in the proposed thesis and the proposed method of procedure. (Amount of credit given, depends upon the nature of the thesis subject; and the amount of time given thereto and the quality of the work.)

Mr. Clarke

DAIRY

Mr. LaMaster Mr. Goodale

Dairy 21—Introductory Dairying—Semester 1 (3 and 2) 3 2/3 cr.

Purpose: To give a practical working knowledge of dairy husbandry and dairy products. *Principal Topics*: History of dairying, dairy breeds,

feeds and feeding, judging dairy animals, dairy farm buildings, quality milk production on the farm, testing milk and some of its products, the manufacture of milk products on the farm and the food value of milk and milk products. (*Principles of Dairying*—Henry F. Judkins—Richard W. Smith, Jr., Edition).

Mr. Goodale

Dairy 31—Dairy Cattle Judging—Semester 1 (0 and 2) 2/3 cr.

Prerequisite, Required: Dairy 21.

Purpose: To give an understanding of dairy form, breed type and relations between form and function in dairy cattle. *Principal Topics*: Study of score cards, show yard requirements and classifications, fitting cattle for show and sale, values as influenced by form, buying dairy cattle, practice in judging Jersey, Guernsey and Holstein cattle of all ages and both sexes.

Mr. LaMaster

Dairy 32—Genetics—Semester 2 (2 and 2) 2 2/3 cr.

Prerequisite: Suggested Ag. Ec. 33.

Purpose: To give the student an understanding of the principles of heredity and variation with special reference to their application to the animal kingdom. *Principal Topics*: Mendel's law, physical basis of inheritance, chromosome theory, linkage, expression and interaction of factors, origin of hereditary differences, inheritance of quantitative characters, biometric methods. (*Principles of Genetics*—Sinnott and Dunn—Second Edition.)

Mr. LaMaster

Dairy 34—Creamery Organization and Management—Semester 2 (3 and 0) 3 cr.

Prerequisite, Required: Dairy 21.

Purpose: To give a comprehensive understanding of the business of operating dairy plants with special emphasis on organization and practical management problems. *Principal Topics*: Survey before organization, form of organization, creamery construction, sewage disposal, refrigeration, labor, purchasing raw materials, equipment and supplies, power, water, rent, depreciation, interest, insurance, overrun, mechanical losses, manufacturing unit costs, marketing records, salesmanship, advertising, business correspondence, credits and collections, creamery bookkeeping, drawing creamery plans, and mathematical problems for the dairy plant operator. (*Management of Dairy Plants*—Mortensen.)

Mr. Goodale

Dairy 35—Dairy Cattle Feeding and Management—Semester 1 (2 and 2) 2 2/3 cr.

Purpose: To give the fundamental principles in the care, feeding and management of dairy cattle of all ages and both sexes. *Principal Topics*: General considerations in selecting a breed, selecting the individual cow, calf raising, growth and development, raising dairy heifers, care and management of the milking herd, milking factors, feeding for milk production, stables for cows, dairy barn equipment, handling manure. (*Dairy Cattle* and *Milk Production*—Eckles.)

Mr. LaMaster

Dairy 41—Dairy Manufactures (Butter and Market Milk)—Semester 1 (2 and 3) 3 cr.

Prerequisite, Required: Dairy 21 and Chem. 38.

Purpose: To give a thorough knowledge of the manufacture of creamery butter, and the processing of market milk and special milks. *Principal Topics*: Development of buttermaking, plant equipment, factory sanitation, processing market milk, testing milk and milk products, buying milk and cream, receiving and grading milk and cream, neutralization, pasteurization, removing flavors and odors, ripening, starters and starter making, cultured milks, churning cream and all subsequent processes until butter is ready for market, composition control, by-products, butter scoring, and butter storage. (*The Butter Industry*—Second Edition, 1927—Hunziker.)

Mr. Goodale

Dairy 42—Dairy Manufactures (Ice Cream and Cheese)—Semester 2 (2 and 4) 3 1/3 cr.

Prerequisite, Required: Dairy 21 and Chem. 38.

Purpose: A thorough study of ice cream making and the manufacture of soft cheese. *Principal Topics*: Development of ice cream industry, classification and specialties, colors and flavors, fruits in ice cream and ices, ingredients of the mix, calculation of the mix, processing mix and all subsequent steps in manufacturing and storing until ice cream is ready for consumer, composition control, analyzing products used in ice cream, defects in ice cream, merchandising; processing and marketing soft cheese. (*Ice Cream*—Turnbow and Raffetto.)

Mr. Goodale

Dairy 43—Dairy Cattle Breeding—Semester 1 (1 and 2) 1 2/3 cr.

Prerequisite: Dairy 32 Genetics.

Purpose: To give the student an understanding of the methods used in developing and improving the breeds of dairy cattle. *Principal Topics*: Breed history, pedigrees, advanced register, methods of indexing proved sires, statistical study of the relations of environment to production.

Mr. LaMaster

Dairy 48—The Nutrition of Dairy Cattle—Semester 2 (2 and 0) 2 cr.

Prerequisite: Dairy 35.

Purpose: To give the student an understanding of the methods by which the animal body converts vegetable products into animal products. *Principal Topics*: Composition of animals and feeding stuffs, digestion and resorption, circulation, respiration and excretion, metabolism, balance of nutrition, requirements for maintenance, growth, reproduction and milk production, function of minerals and vitamins.

Mr. LaMaster

Dairy 51—Seminar—Semester 1 (1 and 0) 1 cr.

Dairy 52—Seminar—Semester 2 (1 and 0) 1 cr.

Prerequisites, Required: Dairy 21 and Dairy 35.

Purpose: To study special research problems in production and manufactures, and the exposition of the results by theses. *Principal Topics*: Special selected individual topics not fully covered in course work, with emphasis placed on latest research.

Mr. LaMaster Mr. Goodale

DRAWING

Mr. Klugh

Mr. Harris Mr. Hodge Mr. Carter

Drawing 11—Freehand Drawing—Semester 1 (0 and 2) 2/3 cr.

Purpose: To give the student a training in seeing and representing proportion and detail. *Principal Topics*: Proportion. Detail. Perspective.

Mr. Hodge

Drawing 12—Mechanical Drawing—Semester 2 (0 and 2) 2/3 cr.

Purpose: To train the student in the fundamentals of mechanical drawing to the point where he will be able to read drawings, and make drawings of simple subjects. *Principal Topics*: Orthographic Projection. Dimensioning. Blue Printing. (text to be announced.)

Mr. Hodge

Drawing 13—Engineering Drawing—Semester 1 (0 and 4) 1 1/3 cr.

Purpose: To give the student a thorough grounding in the principles of drawing. *Principal Topics*: Orthographic Projection in Mechanical Drawing and Perspective in Freehand sketching. (*Engineering Drawing* —French.)

Mr. Harris Mr. Carter

Drawing 14—Engineering Drawing—Semester 2 (0 and 4) 1 1/3 cr.

Prerequisite, Required: Drawing 13.

Purpose: To train the student to the point where he will be able to make and read shop drawings. *Principal Topics*: Drawing, Dimensioning, Tracing and Blue Printing, Machine Parts. Intersection and development. (*Engineering Drawing*—French.)

Mr. Harris Mr. Carter

Drawing 25—Mechanical Drawing—Semester 1 (0 and 2) 2/3 cr.

Prerequisite: Drawing 14.

Purpose: To ground the student in those fundamentals and essentials of the language of the engineer. *Principal Topics*: A continuation of the work given in Drawing 14. Relations of projections to each other in the reading of drawings. Shop drawings in details and assemblies. Tracing and blue printing. (*Engineering Drawing*—French.)

Mr. Klugh

Drawing 26—Elementary Design and Kinematics—Semester 2 (0 and 2) 2/3 cr.

Prerequisite: Drawing 25.

Purpose: To train the engineer to apply problems in drafting room solution. *Principal Topics*: Elementary principles of machine design, carefully studied and worked out in class problems. Theory and practice involving problems in Kinematics. (*Engineering Drawing*—French. *Engineering Kinematics*—Smith.)

Mr. Klugh

Drawing 28—Structural Drawing—Semester 2 (0 and 2) 2/3 cr.

Prerequisite: Drawing 25.

Purpose: To acquaint the student with those needful helps in taking up major design problems in the structural field. *Principal Topics*: Elementary structural principles; study of symbols, proportions and minor design. Reading of structural drawings, study of methods in drafting, tracing and blue printing. (*Engineering Drawing*—French.)

Mr. Klugh

Drawing 31—Kinematics and Machine Design—Semester 1 (1 and 2) 1 cr.

Purpose: To teach the engineer the aid of layouts in the solution of many of his problems. *Principal Topics*: The course is a continuation of Drawing 26 giving a more extended course in the theory and applications of design problems. Tracing and blue printing. (*Engineering Drawing*—French. *Engineering Kinematics*—Smith.)

Mr. Klugh

Drawing 32—Machine Design—Semester 2 (1 and 2) 1 cr.

Prerequisite: Drawing 31.

Purpose: To give the proper background to the student before he take up his design problems in his major subject. *Principal Topics*: Simple problems in design. Adaption of theory to practice of engineering principles needed in the design of machines. (Text to be announced.)

Mr. Klugh

Vocational Education 38—Teaching of Drawing—Semester 2 (2 and 2) 3 cr.

Prerequisite: Drawing 12 or equivalent.

Purpose: Training in methods for teaching drawing. *Principal Topics*: Psychology as applied to the subject; layout of suitable course to meet group needs; some of the arts and sciences used in drawing; fitness of teacher and student in class work; vocational direction in this field; methods; reading of drawings; grades and grade methods. (Reference texts used as assigned.)

Mr. Klugh

ECONOMICS AND GOVERNMENT

Mr. Sherrill

E. and G. 12.—American Government and Political Parties—Semester 1 or 2 (2 and 0) 2 cr.

Purpose: To acquaint the student with the system of American Federal Government. *Principal Topics*: The Constitution, Senate, House of Representatives, joint congressional activities, powers of Congress, President, executive departments, independent establishments, Judiciary, relation to the states and territories, citizenship, international relations, political parties. (*An Outline of American Federal Goverment*—Lewis.)

Mr. Sherrill Mr. Holmes

E. AND G. 15—AMERICAN GOVERNMENT AND POLITICAL PARTIES—Semester 1 or 2 (3 and 0) 3 cr.

Purpose: To acquaint the student with the system of American Federal Government. *Principal Topics*: The Constitution, Senate, House of Representatives, joint congressional activities, powers of Congress, President, executive departments, independent establishments, Judiciary, relation to the states and territories, citizenship, international relations, political parties. (*An Outline of American Federal Government*—Lewis.)

MR. HOLMES

E. AND G. 21—ELEMENTARY ECONOMICS—Semester 1 or 2 (2 and 0) 2 cr.

Prerequisite: History 14 or Agricultural Economics 22.

Purpose: To give a general introduction to business organization and practices and to some fundamental principles of economics. *Principal Topics*: Risk-taking, money, banking, business cycles, foreign trade, production, value. (*Principles of Economics*—Faubel.)

MR. SHERRILL

E. AND G. 31—CONTEMPORARY ECONOMIC PROBLEMS—Semester 1 or 2 (3 and 0) 3 cr.

Prerequisite: Economics 21.

Purpose: To help the student in understanding current economic conflict and change. *Principal Topics*: The government and business, capitalism and its proposed reforms, banking and currency, labor problems, insurance, the tariff and foreign trade, the stabilization of business (*Textbook to be selected.*)

E. AND G. 32—ECONOMIC THEORY—Semester 2 (3 and 0) 3 cr.

Prerequisite: Economics 21 and permission of the instructor.

Purpose: To give an elementary knowledge of the principal economic theories and theorists. *Principal Topics*: Value, distribution, money, business cycles, biographies of noted economists. (*Textbook to be selected.*)

E. AND G. 41—POLITICAL SCIENCE—Semester 1 (3 and 0) 3 cr.

Prerequisite: American Government 12 and permission of the instructor.

Purpose: To acquaint the student with the general principles of political science. *Principal Topics*: The state as an institution, its nature, its origin and development, its organization and its functions, its institutions and its theories, its relation to the individuals that compose it and to other states. (*Political Science*—Gettell.)

MR. SHERRILL

E. AND G. 42—STATE AND LOCAL GOVERNMENT IN SOUTH CAROLINA—Semester 2 (2 and 0) 2 cr.

Prerequisite: American Government 12 and permission of the instructor.

Purpose: To familiarize the student with the way in which government is actually carried on in South Carolina. *Principal Topics*: Place of the state in the nation, the constitution, legislature, executive, judiciary, state administration, state finance, economic and social functions, county government, municipal government, popular control. (*Source material will be used instead of textbook*).

MR. SHERRILL

E. AND G. 44—INTRODUCTION TO BUSINESS—Semester 2 (3 and 0) 3 cr.

Prerequisite: Economics 21 and permission of the instructor.

Purpose: To provide an elementary approach, by the case method, to the study of business. *Principal Topics*: Types of business enterprise, organization of ownership, financing and promotion, business finance, production control, wages and labor organization, distribution, prices, sales, advertising. (*An Introduction to Business*—Gilbert and Gragg.)

MR. SHERRILL

ELECTRICAL ENGINEERING

MR. RHODES

MR. TINGLEY MR. ASBILL MR. CREDLE

E. E. 31—DIRECT CURRENT MACHINERY—Semester 1 (5 and 0) 5 cr.

Prerequisite: Math. 21, 22. Physics 21, 22.

The theory of direct current circuits, and the characteristics of direct current generators, motors, and control equipment.

MR. ASBILL

E. E. 31a—ELECTRICAL MEASUREMENTS—Semester 1 (0 and 3) 1 cr.

Prerequisite: Must parallel or follow E. E. 31.

A laboratory study of the principles of direct current, magnetic and electrostatic circuits, and the instruments used in their measurement.

Mr. Asbill

E. E. 32—Alternating Current Circuits—Semester 2 (5 and 0) 5 cr.

Prerequisite: E. E. 31.

The theory of alternating current circuits embracing single phase and polyphase systems.

Mr. Rhodes Mr. Asbill

E. E. 32a—Electrical Laboratory—Semester 2 (0 and 4) 1 1/3 cr.

Prerequisite: E. E. 31, and must parallel or follow E. E. 32.

The experimental determination of the characteristics of typical direct current generators, motors and auxiliary equipment; and, in addition, a laboratory study of the laws of alternating current circuits.

Mr. Asbill

E. E. 33—Direct Current Machinery—Semester 1 (4 and 0) 4 cr.

Prerequisite: Math. 21, 22. Physics 21, 22.

The study of direct current circuits, generators, motors, and controls. Similar to E. E. 31 but designed primarily for students in Mechanical Engineering.

Mr. Credle

E. E. 33a—Electrical Measurements—Semester 1 (0 and 3) 1 cr.

Prerequisite: E. E. 33.

Similar to E. E. 31-a, but planned for students in Mechanical Engineering.

Mr. Credle

E. E. 34—Alternating Current Circuits—Semester 2 (4 and 0) 4 cr.

Prerequisite: E. E. 33a.

The theory of alternating currents in single phase and polyphase systems and the study of the transformer and induction motor.

Mr. Credle

E. E. 34a—Electrical Laboratory—Semester 2 (0 and 3) 1 cr.

Prerequisite: Must parallel or follow E. E. 33a.

The characteristics of direct current generators, motors and control apparatus, and, in addition, a laboratory study of single phase and polyphase alternating current circuits.

Mr. Credle

E. E. 35—Electrical Machinery—Semester 1 (2 and 2) 2 2/3 cr.

Prerequisite: Physics (for Textile, Ag. Engineering and Ind. Ed. students.)

An elementary course on direct and alternating current machinery with direct reference to selection of types for specific duties.

Mr. Credle

E. E. 36—Electrical Machinery—Semester 2 (3 and 2) 3 2/3 cr.

An elementary course on direct and alternating machinery with special emphasis on operating characteristics and adaptability of types to specific duties.

Mr. Credle

E. E. 38—Vocational Electricity—Semester 2 (1 and 2) 1 2/3 cr.

Prerequisite: E. E. 35.

This course is planned for teachers of electricity in high schools. It embraces the application of fundamental principles of electricity to experiments and projects of special interest and value to high school students, together with principles of organization and prosecution of such work by the instructor.

Mr. Credle

E. E. 41—Alternating Current Machinery—Semester 1 (5 and 0) 5 cr.

Prerequisite: E. E. 31 and E. E. 32.

The theory and operating characteristics of the leading types of transformers, generators, motors, converters, and controls.

Mr. Rhodes

E. E. 41a—Electrical Laboratory—Semester 1 (1 and 3) 2 cr.

Prerequisite: Must parallel or follow E. E. 41.

An experimental analysis of the theory and operating characteristics of transformers, and synchronous generators and motors. This course also embraces some of the more advanced experiments with direct current machinery.

Mr. Tingley

E. E. 42—Electrical Engineering—Semester 2 (3 and 0) 3 cr.

A course embracing problems in illumination, distribution, and application engineering.

Mr. Rhodes

E. E. 42a—Electrical Laboratory—Semester 1 (1 and 3) 2 cr.

Prerequisite: E. E. 41.

A continuation of E. E. 41a including experiments on induction and other asynchronous motors, converters, rectifiers, automatic controls, and transmission systems.

Mr. Tingley

E. E. 43—Alternating Current Machinery—Semester 1 (3 and 0) 3 cr.

Prerequisite: E. E. 34.

The theory and operating characteristics of synchronous generators, motors, and converters.

Mr. Tingley

E. E. 43a—Electrical Laboratory—Semester 1 (0 and 3) 1 cr.

Prerequisite: Must parallel or follow E. E. 43.

A course paralleling E. E. 43 for the experimental determination of the operating characteristics of alternating current machinery.

Mr. Tingley

E. E 44—Transmission—Semester 2 (3 and 0) 3 cr.

Prerequisite: E. E. 41.

A course embracing electrical and mechanical principles of economic transmission of electrical energy.

Mr. Tingley.

E. E. 45—Electrical Design—Semester 1 (0 and 3) 1 cr.

Prerequisite: E. E. 31.

An analysis of the construction and characteristics of a number of direct current machines through selected problems in design.

Mr. Rhodes

E. E. 46—Electrical Design—Semester 2 (0 and 3) 1 cr.

Prerequisite: E. E. 41.

A continuation of E. E. 45 embracing similar problems pertaining to alternating current machinery.

Mr. Rhodes

E. E. 47 and 48—Radio—Semester 1 and 2 (2 and 0) 2 cr.

Prerequisite: E. E. 41 or 43.

The study of the principal types of thermionic devices and their application to radio communication. Includes laboratory work on tubes and their uses in radio transmission and reception.

Mr. Asbill

E. E. 49—Engineering Problems—Semester 1 or 2 (2 and 0) 2 cr.

Intended to enable a limited number of students to undertake specific projects in which they may be definitely interested. The laboratories afford excellent facilities for this work.

Dept. Staff

E. E. 50—Power Stations—Semester 2 (2 and 0) 2 cr.

A course covering the general subject of economic production of electrical energy and the study of typical arrangements of generating equipment in steam and hydrostations.

Mr. Rhodes

ENGLISH

Mr. Daniel

Mr. Bradley Mr. Taylor Mr. Lane Mr. Kinard Mr. Rankin Mr. Cooke

English 15, 16—Composition and American Literature—Semesters 1 and 2 (3 and 0) 3 cr.

Purpose: To train the student in the use of correct, accurate, and effective language and to acquaint him with outstanding works of the major American authors. *Principal Topics*: Some review of principles of grammar and punctuation; principles of and practice in the various units of composition, especially the paragraph; letter writing; vocabulary; supplementary reading and classroom reports; selected works from the principal American authors. (*Century Collegiate Handbook*—Greever and Jones; *Three Centuries of American Poetry and Prose*—Revised Edition—Newcomer, Andrews, Hall; a dictionary.)

Mr. Taylor Mr. Lane Mr. Rankin Mr. Kinard Mr. Cooke

English 21, 22—English Literature and Advanced Composition—Semesters 1 and 2 (2 and 0) 2 cr.

Prerequisite: English 15 and 16.

Purpose: To give the student a more intimate knowledge and appreciation of Nineteenth Century English literature; to cultivate his powers of composition for accurate expression. *Principal Topics*: An intensive study of outstanding authors of the Romantic and Victorian periods of English literature; supplementary reading from the best authors; periodic themes based upon reading and other assignments; classroom discussion of themes; consultation with students for individual discussion. (*Readings in the Literature of England,* Vol. II—Heath.)

Mr. Bradley Mr. Taylor Mr. Lane Mr. Kinard Mr. Rankin

English 31—Public Speaking—Semester 1 (2 and 0) 2 cr.

Prerequisite: English 21 and 22.

Purpose: To train the student in the art of practical public speaking. *Principal Topics*: The improvement of pronunciation, enunciation, voice, and stage presence; outlining and delivery of original speeches; impromptu and extemporaneous speaking; debate; parliamentary practice. (*Better Speech*—Woolbert and Weaver.)

Mr. Daniel

English 32—Business Law—Semester 2 (2 and 0) 2 cr.

Prerequisite: English 21 and 22.

Purpose: To fix the principles of Business law in the student's mind with the view of helping him to avoid legal difficulties. *Principal Topics*: Origin and purpose of laws; contracts; agency; negotiable instruments; sales; personal and real property; cases. (*American Business Law*—Frey.)

Mr. Daniel

English 31a, 32a—Public Speaking—Semesters 1 and 2 (1 and 0) 1 cr.

Prerequisite: English 21 and 22.

Purpose: To train the student in the art of practical public speaking. *Principal Topics*: The improvement of pronunciation, enunciation, voice, and stage presence; outlining and delivery of original speeches; impromptu and extemporaneous speaking; debate; parliamentary practice. (*Better Speech*—Woolbert and Weaver.)

Mr. Bradley

English 43, 44—Shakespeare—Semesters 1 and 2 (2 and 0) 2 cr.

Prerequisite: English 21 and 22.

Purpose: To give the student as comprehensive an acquaintance with the dramatic work of Shakespeare as possible. *Principal Topics*: A general approach to appreciation of plays from the point of view of the theater; Shakespeare's development as a dramatist; matters of character and presentation of individual plays. (A complete edition of Shakespeare's plays; *The Facts about Shakespeare*—Neilson and Thorndike.)

Mr. Taylor

English 45—News Writing—Semester 1 (2 and 0) 2 cr.

Prerequisite: English 21 and 22.

Purpose: To give additional training in English through the project method. *Principal Topics*: Gathering the news; kinds of news stories; structure and style; lead; reporting; interviewing; reports.

Mr. Daniel

English 46—Business English—Semester 2 (2 and 0) 2 cr.

Prerequisite: English 31 and 32.

Purpose: To give training in business customs and practices. *Principal Topics*: Business letters and forms; methods of approach; securing and conducting interviews; presenting plans and propositions; salesmanship; reports; developing a pleasing personality. (*Salesmanship*—Fernald.)

Mr. Daniel

English 47, 48—Chaucer—Semesters 1 and 2 (2 and 0) 2 cr.

Prerequisite: English 21 and 22.

Purpose: To give the student familiarity with the language, verse forms, and stories of Chaucer; to cultivate a grasp of fourteenth century thought and literary motivation. *Principal Topics*: (First Semester) Reading from the Prologue and the Canterbury Tales with other short selections; supplementary reading from contemporary and later critical authors; term paper; (Second Semester) Detailed study of Troilus and Criseyde; term paper. (*The Works of Chaucer.*)

Mr. Bradley

English 49—Agricultural Journalism—Semester 2 (2 and 0) 2 cr.

Prerequisite: English 21 and 22.

Purpose: To give training in the fundamentals of journalism; to apply this training to the actual writing and publishing of agricultural copy. *Principal Topics*: Introductory study of the basic principles of journalism; detailed study of agricultural news story, feature story, edi-

torial, and miscellany; periodic publication of agricultural news stories in country weeklies; publication of at least one feature story in an agricultural journal. (*Agricultural Journalism*—Crawford and Rogers.)

Mr. Bradley

English 50—Thesis—Semester 2 (0 and 2) 2/3 cr.

Purpose: To give the student practice in making research and presenting the results in proper form. *Principal Topics*: Statement of the problem; object and scope of the investigation; history of the problem; possible application of results; plan of procedure. (To be prepared under the direction of a member of the School of General Science and approved as to content by him and as to form by a representative of the English department.)

English 51, 52—Contemporary Literature—Semesters 1 and 2 (2 and 0) 2 cr.

Prerequisite: English 21, 22.

Purpose: To give the student an acquaintance with contemporary English and American literature and to help him to understand and discuss the principal ideas expressed there. *Principal Topics*: In view of the extent of the field, only the best works of significant writers are studied. The novel and short story are considered the most important forms. Biography and poetry are touched on in the second semester. The drama is excluded. Wide reading and oral discussions are favored as against formal written reports.

Mr. Rankin

English 53, 54—Introduction to Drama—Semesters 1 and 2 (2 and 0) 2 cr.

Prerequisite: English 21 and 22.

Purpose: To offer a systematic study of the principles and progress of drama from the time of Aeschylus to the present day. *Principal Topics*: Dramatic history and criticism, representative plays, the stage and theatrical conditions, the continental background of English drama, influence of life of the time on authors, actors and managers, written exercises in dramatic criticism, class discussions of new trends in legitimate drama and movies, controlled breathing, voice training, emotional expression and the theory of acting. (*Introduction to Drama*—Hubbell and Beaty.)

Mr. Lane

English 57, 58—Selected Masterpieces from English Literature—Semesters 1 and 2 (2 and 0) 2 cr.

Prerequisite: English 21 and 22.

Purpose: To help students learn and appreciate a variety of literary masterpieces, selections not included in other courses at Clemson. *Principal Topics*: Selections studied vary with classes—a representative list for a semester: *Paradise Lost* (6 books); *Gulliver's Travels; Beowulf; Diary of Samuel Pepys* (selections); Boswell's *Johnson* (selections); Pope's *Iliad* (selections); *Tom Jones;* Bacon's essays; *Pilgrim's Progress.* (No general text. Cheap editions of some selections are bought.)

Mr. Kinard

GEOLOGY AND MINERALOGY

Mr. Calhoun

Geol. 21—Agricultural Geology—Semester 1 (3 and 0) 3 cr.

Purpose: In this course the student is shown the relationships existing between geology and practical agricultural problems, especially those in connection with soil formation and adaptation. *Principal Topics*: Soil making minerals and rocks; formation of soils from rocks; the question of the relation of underground water to springs, wells and artesian wells; drainage problems and soil water are considered. The soil series are taken up with relation to the rocks from which they are derived and the geologic agents which aid in their formation. (*Agricultural Geology*—Emerson.)

Mr. Calhoun

Geol. 23, 24—General Geology—Semesters 1 and 2 (3 and 0) 3 cr.

Purpose: To familiarize students with geology as applied not only to a thorough enjoyment of nature, but also to its many practical applications. *Principal Topics*: These courses emphasize topographic forms and their origin. The earth is considered first as a member of the solar system and from this the evolution of the earth through all of its changes to the geography and life of the present day is traced. Special attention is given to the study of topographic and geologic maps. (*College Geology*—Chamberlin and Salisbury.)

Mr. Calhoun

Geol. 33, 34—Mineralogy—Semesters 1 and 2 (2 and 2) 2 2/3 cr.

Purpose: To give to students a comprehensive knowledge of crystallography, mineralogy, and blowpipe analysis. *Principal Topics*: The first semester is devoted to crystallography and optical mineralogy; the second to descriptive and determinative mineralogy. Crystallography is taught by lectures with the laboratory work based on models and natural crystals. Mineralogy and blowpipe analysis enable the student to identify

readily all but the rarer minerals. (*Blowpipe Analysis*—Moses and Parsons.)

Mr. Calhoun

Geol. 40—Economic Geography—Semester 2 (3 and 0) 3 cr.

Purpose: A course for those desiring to understand the relation between geography and economic conditions and the laws of trade. *Principal Topics*: (1) Industrial geography, which includes the geographic, geologic, and climatic laws governing the establishment of any form of industry. All agricultural products, fish, manufacturing and mineral resources are considered in terms of the above. (2) Commercial geography, which concerns itself with the laws of trade and the trade routes of the world. The general influence of geologic factors on international relationship and policy is stressed. (*Industrial and Commercial Geography*—Smith.)

Mr. Calhoun

Geol. 42—Meteorology—Semester 2 (2 and 0) 2 cr.

Purpose: A course designed to give the general principles of meteorology and climatology as applied to farming, aviation, and to those sciences which require a knowledge of such principles. *Principal Topics*: The course concerns itself in detail with those elements which control the weather, such as temperature, pressure, wind, humidity, clouds, and precipitation. The study of weather maps and conclusions to be drawn from them are made an important part of the course. (*Meteorology*—Milham.)

Mr. Calhoun

Geol. 43—Engineering Geology—Semester 1 (2 and 0) 2 cr.

Purpose: To show the practical application of geology to problems of engineering. *Principal Topics*: Materials from the earth's crust which the engineer must use; structural geology which gives an idea how such material is arranged; dynamic geology which emphasizes both those forces which tear the earth down and those which build it up. Topographic and geologic maps are used extensively in connection with the text. (*Elements of Engineering Geology*—Ries and Watson.)

Mr. Calhoun

HISTORY

Mr. Holmes

History 14—American Economic History—Semester 1 or 2 (2 and 0) 2 cr.

Purpose: To teach the student to think in terms of economic and social forces. *Principal Topics*: Commercial Revolution of Europe of the fifteenth century, colonization, mercantilism, industrial revolution, economic aspects of the several American wars, the westward movement, transportation, rise of labor, decline of laissez faire, recent agricultural development. (*Economic History of the United States*—Faulkner.)

Mr. Holmes

History 31, 32—History of Civilization—Semester 1 and 2 (3 and 0) 3 cr.

Prerequisite: Open only to Juniors and Seniors.

Purpose: To inform the student in a general way of all the outstanding civilizations of the past. *Principal Topics*: Egypt with its monuments and religion; Babylonian law and commerce; Aegean culture; introduction of the horse, iron and Indo-European literature; Hellenic and Hellenistic cultures: art, literature, philosophy, science; Roman law, expansion, and civilization; the feudal system; medieval art; rise of modern states and capitalism; Age of Louis XIV; Age of Reason; modern science, industry and art. (*History of Civilization*—Thorndike.)

Mr. Holmes

HORTICULTURE

Mr. Musser

Mr. Newman Mr. Andrews

Hort. 22—General Horticulture—Semester 2 (3 and 2) 3 2/3 cr.

Purpose: To give the student a knowledge of the basic scientific principles underlying the art and industry of economic production of fruit and vegetables, emphasizing home orcharding and home and market gardening. *Principal Topics*: The scope and trends in horticulture, fundamentals of plant structure, growth and fruiting habits, requirements for fruitfulness, high yields and high quality production including water, soil nutrients, soil management, carbohydrates and proper pollination. A study of orchard locations, varieties, nursery practices and orchard plans, training, pruning, control of orchard ills. The construction and management of hot beds and cold frames, plant growing, general garden practices, response of vegetable crops to fertilizers, manures, irrigation and cultivation and the control of garden pests. Basic principles of common storage and local marketing. (*Orcharding*—Gardner, Bradford and Hooker and *Vegetable Gardening*—Knott.)

Mr. Andrews

Hort. 31—Plant Propagation and Nursery Management—Semester 1 (2 and 2) 2 2/3 cr.

Purpose: To give the student a thorough knowledge of the methods of managing a commercial nursery and propagating plants of all kinds. *Principal Topics*: Methods of propagation; time, manner and material for making cuttings, temperature and media for rooting cuttings of ornamental trees, shrubs and flowering plants; propagating structures. Soils, fertilizers and management methods for commercial nurseries. Practical instruction given in field and greenhouse. (*The Nursery Manual*—Bailey.)

MR. NEWMAN

HORT. 32—LANDSCAPE GARDENING—Semester 2 (2 and 2) 2 2/3 cr.

Purpose: To give the student a practical course in general landscape gardening, a thorough knowledge of plant materials used in landscape designing. *Principal Topics*: Kinds of landscape gardens, principles of landscape art, improvement of home and school grounds and park areas; mapping, designing, identification and adaptation of decorative plants to landscape work. (Assigned references.)

MR. NEWMAN

HORT. 33—PRINCIPLES OF VEGETABLE PRODUCTION—Semester 1 (2 and 2) 2 2/3 cr.

Purpose: To give the student a knowledge of the basic principles underlying the methods used in growing vegetables. *Principal Topics*: Types and classification of vegetables, plant growing, forcing and forcing structures, seeds, use and value of the various fertilizer materials, transplanting, value of cultivation, irrigation, relation of water to quality, storage. Review of important experimental work. (*Vegetable Crops*—Thompson.)

MR. ANDREWS

HORT. 41—SYSTEMATIC POMOLOGY—Semester 1 (2 and 2) 2 2/3 cr.

Purpose: To acquaint students with the many and varied characters of deciduous and citrus fruits, both plant and fruit. To classify and identify varieties. *Principal Topics*: The structure of fruit plants—roots, stems, leaves, flowers, fruit, etc.; physiological characters; methods of work in systematic pomology and of classification; habitat, history, color, form, structure, quality, flavor and use of Pome, Drupe, Bramble and Heath fruits, Grapes, Strawberries, currants and Gooseberries, and various citrus fruits; judging and displaying fruits. (*Systematic Pomology*—Hedrick.)

MR. MUSSER

HORT. 41—CONT'D.—SMALL FRUIT CULTURE.

Purpose: To give the student a knowledge of the principles of production and preparation for market of small fruits. *Principal Topics*:

Varieties, soils, sites, culture, fertilizers, harvesting and preparation for marketing of grapes, strawberries, dew—and blackberries, raspberries and other small fruits. (assigned readings.)

Mr. Musser

Hort. 42—Commercial Pomology—Semester 2 (2 and 2) 2 2/3 cr.

Purpose: To give the students a knowledge of the methods of establishing and managing a large fruit orchard. *Principal Topics*: Fruit bud formation, rest period and water responses of fruit plants; fruit tree soils; fruit setting and self-unfruitfulness of the important fruits; orchard soil management and responses of various fruits to applications of fertilizers; fundamental principles of and response of fruit trees to pruning; effect of climatic differences; freezing of tissues and means of avoiding injury; harvesting, transportation, storage. (*Fruit Growing*—Chandler.)

Mr. Musser

Hort. 43—Systematic Olericulture—Semester 1 (2 and 2) 2 2/3 cr.

Purpose: To give the student a knowledge of the kinds of vegetables and their natural relationships, including various characters of many vegetable varieties and crops, both the plant and the edible parts. To classify and identify varieties. *Principal Topics*: The structure of vegetable plants—roots, stems, leaves, flowers, fruit. etc.; physiological characters; scientific nomenclature, habits, history, form, quality, color, flavor and use of perennial vegetables, greens, salad, cole, root and bulb crops, Irish and sweet potato, beans, peas, tomato, egg-plant, pepper, cucumber, muskmelon and watermelon, sweet corn, okra, etc. (*Assigned References.*)

Mr. Andrews

Hort. 43—Continued—Nut Culture

Purpose: To give the student a knowledge of the principles of production and preparation for market of the principal nut crops. *Principal Topics*: Propagation, Varieties, Soils, Sites, Cultural Methods, Pollination Problems, Fertilizers, Harvesting and grading of pecans, walnuts, filberts, and almonds. (*Pecan Culture*—Stuckey and Kyle.)

Mr. Andrews

Hort. 44—Truck Crops—Semester 2 (2 and 2) 2 2/3 cr.

Prerequisite, Required: Hort. 32.

Purpose: To give the student a thorough knowledge of the truck industry with special reference to growing and marketing truck crops along the Atlantic coast. *Principal Topics*: Plant characteristics, varieties, soils, fertilizers, cover crops, water requirements, harvesting and preparation for market of asparagus, beans, cabbage, Irish potatoes, sweet potatoes, canta-

loupes, watermelons, tomatoes, and various less important crops. (*Vegetable crops*—Thompson), (Reference: *Truck Crop Plants*—Jones and Rosa.)

Mr. Newman

Hort. 45—Landscape Design—Semester 1 (1 and 3) 2 cr.

Prerequisite, Required: Hort. 31.

Purpose: To familiarize the student with plant materials used in landscape designing for home grounds, parks, and small estates. *Principal* Topics: Systematic study of trees, shrubs, and herbaceous plants used on landscape designs; practical problems to be worked with the same attention to details as is necessary in actual practice of landscape designing.

Mr. Newman

Hort. 46—Floriculture—Semester 2 (2 and 2) 2 2/3 cr.

Purpose: To give the student a knowledge of the principles and requirements for growing flowers both in greenhouses and open fields. *Principal Topics*: Survey of the industry, species and varieties, soils, temperatures, water and light requirements, fertilizers, cultural and training methods, handling and arrangement and display of cut flowers, etc. The principal crops considered are: roses, carnations, dahlias, bulbs, chrysanthemums, etc. (*Principles of Floriculture*—White.)

Mr. Newman

Hort. 48—Landscape Design—Semester 2 (1 and 3) 2 cr.

Prerequisite, Required: Hort. 31, 43.

Purpose: To give the student a thorough knowledge of and practical experience in landscape problems of large areas. *Principal Topics*: Civic improvements, mill villages, public buildings squares, parks, storm water control, water courses, lakes, lawns, drives and walks; trees and shrubs and their requirements; study of finished problems in Landscape Design, original problems, field work and drafting.

Mr. Newman

Hort. 51, 52—Special Problems—Semesters 1 and 2 (1 and 0) 1 cr.

Purpose: To give experience in interpreting and analyzing reports of recent horticultural investigations. *Principal Topics*: Recent research work on various phases of horticulture, methods of conducting investigations, preparation of report of investigations. (Assigned References from various sources.)

Mr. Musser and Hort. Staff

HORTICULTURAL EQUIPMENT

This department has extensive orchards and vineyards in which over three hundred varieties of eight different kinds of fruits are grown and which provide excellent facilities for a thorough study of fruits and fruit culture. A new stationary spray system has just been completed for the orchards and vineyards. Four acres are devoted to vegetable crops, part of which is irrigated. Modern greenhouses and other forcing structures for plant propagation, plant growing and forcing instruction are used in class work. A well stocked ornamental nursery and many acres of beautiful college campus furnish adequate materials for landscape gardening and design courses.

MATHEMATICS

Mr. Martin

Mr. Shanklin Mr. Hunter Mr. Sheldon Mr. Burton Mr. Edwards

Math. 11—Plane Trigonometry—Semester 1 (5 and 0) 5 cr.

Prerequisite: Algebra and Plane Geometry.

Purpose: To give the student a thorough knowledge of the principles of plane trigonometry together with its various applications to related problems and exercises. *Principal Topics*: Trigonometric functions of an acute angle, reciprocal functions, functions of complementary angles, fundamental relations between the functions, functions of any angle; logarithms; the right triangle; solutions of problems in heights and distances, projections, forces, velocities, and accelerations, isosceles triangles, polygons, and related circles; oblique triangles, laws of sines, cosines, and tangents with their various applications in the solution of triangles; the functions of the sum and difference of two angles, the double angle, and the half angle; inverse functions, and trigonometric equations. (*Plane Trigonometry*—Ewing.)

Mr. Sheldon Mr. Burton Mr. Edwards

Math. 12—College Algebra and Analytic Geometry—Semester 2 (5 and 0) 5 cr.

Prerequisite: Mathematics 11.

Purpose: To drill the student on the fundamental principles of algebra which are absolutely essential in the pursuit of his higher mathematics and to give him a thorough knowledge of the working principles of analytic geometry. *Principal Topics*: The first month will be devoted to a rapid review of the fundamental principles of algebra with special emphasis on the subjects which will come up in subsequent courses in mathematics. (*Analytical Geometry*—Wilson and Tracy, revised.)

Mr. Sheldon Mr. Burton Mr. Edwards

MATH. 15—AGRICULTURAL MATHEMATICS—Semester 1 (3 and 0) 3 cr.

Prerequisite: Algebra and Plane Geometry.

Purpose: To give the student who has only a limited time for the study of mathematics training in those subjects which he will need most in his subsequent work. *Principal Topics*: The course embraces the study of numerical calculations, algebraic processes, dairy problems, fertilizer formulas, cement mixtures, graphical representations of statistical data, statistics, progressions, interest, annuities, averages, ratios, correlation, etc. (*Mathematics for Agriculture*—Rasor.)

MR. HUNTER MR. SHELDON

MATH. 17, 18—GENERAL SCIENCE MATHEMATICS—Semester 1 and 2 (3 and 0) 3 cr.

Prerequisite: Algebra and Plane Geometry.

Purpose: To prepare the student to cope with the problems arising in the general science and pre-medical courses. *Principal Topics*: A course similar to Mathematics 11, 12, and 15, treating the fundamental topics met with in the sciences. (*General Mathematics*—Currier and Watson.)

MR. MARTIN MR. BURTON

MATH. 21—DIFFERENTIAL CALCULUS—Semester 1 (5 and 0) 5 cr.

Prerequisite: Mathematics 12.

Purpose: To give the student a thorough working knowledge of differential calculus and its various applications. *Principal Topics*: A study of the differentiation of algebraic and transcendental functions, successive differentiation and development of functions, functions of two variables, tangents, normals, and asymptotes, and application of the derivative in mechanics. (*The Calculus*—Dalaker and Hartig.)

MR. MARTIN MR. HUNTER MR. SHELDON

MATH. 22—INTEGRAL CALCULUS—Semester 2 (5 and 0) 5 cr.

Prerequisite: Mathematics 21.

Purpose: To make the student proficient in solving the many problems that arise in this subject, especially those arising in the various branches of engineering. *Principal Topics*: Elementary forms of integration, integration of rational fractions, the definite integral, successive reductions, integration of two variables, geometric applications, multiple integrals, and practical problems arising in engineering subjects. (*The Calculus*—Dalaker and Hartig.)

MR. MARTIN MR. HUNTER MR. SHELDON

MATH. 23—DIFFERENTIAL CALCULUS—Semester 1 (3 and 0) 3 cr.

Prerequisite: Mathematics 12.

Purpose: To give those students taking the textile course the fundamental principles of differential calculus and some of its important applications. *Principal Topics*: Differentiation of algebraic and transcendental functions, with numerous applications in maxima and minima, curve tracing, and velocity and acceleration.

MR. BURTON

MATH. 24—INTEGRAL CALCULUS—Semester 2 (3 and 0) 3 cr.

Prerequisite: Mathematics 23.

Purpose: To drill the student in fundamental principles and applications of integral calculus. *Principal Topics*: A study of the elementary form of integration, integration of rational fractions, the definite integral, geometric applications, multiple integrals, and practical problems arising in engineering subjects. (*The Calculus*—Dalaker and Hartig.)

MR. BURTON

MATH. 25, 26—INDUSTRIAL MATHEMATICS—Semester 1 and 2 (3 and 0) 3 cr.

Purpose: To emphasize the practical side of Arithmetic, Geometry, Algebra, and Trigonometry. *Principal Topics*: Stress is to be placed upon the working of a great many problems from carpentry, the machine shop, construction work, surveying, and allied subjects, in order to obtain proficiency in carrying out a mathematical calculation and achieving the correct result. (*Practical Mathematics*—Palmer.)

MR. SHELDON

MATH. 31—ADVANCED CALCULUS—Semester 1 (2 and 0) 2 cr.

Open to juniors and seniors with a good grade in Math. 22.

Purpose: To give an understanding of the advanced calculus and its application to problems from physics, chemistry, and engineering. *Principal Topics*: Double and triple integration, partial differentiation, development of a function in a series, approximations, curve fitting, curve tracing, indeterminate functions, etc.

MR. SHELDON

MATH. 32—DIFFERENTIAL EQUATIONS—Semester 2 (2 and 0) 2 cr.

Open to juniors and seniors with a good grade in Math. 22.

Purpose: To give the student a working knowledge of the methods used to solve the elementary differential equations of engineering, chemistry, and physics. This course is intended for those who expect to do graduate work or who desire a greater knowledge of the methods employed in scientific and engineering problems. *Principal Topics*: Equations of the first order and first degree; linear equations with constant coefficients; certain particular forms of equations. (Kell's *Elementary Differential Equations.*)

Mr. Sheldon

MECHANICAL ENGINEERING

Mr. Earle

Mr. Curtis Mr. Freeman Mr. Fernow Mr. Shenk
Mr. Philpot *Mr. Sams Mr. Marshall Mr. Topping Mr. Carter

M. E. 12—Forge—Semester 1 or 2 (0 and 4) 1 1/3 cr.

Purpose: To give the student a knowledge of the methods of making iron and steel forgings for use in industry. *Principal Topics*: A study of forge equipment; materials used in forgings; methods of working and treating forgings; inspection and classification of forgings; selection of materials. Some time is devoted to a study of tool steel forgings. Lectures and demonstrations accompany this work.

Mr. Philpot

M. E. 13—Woodwork—Semester 1 or 2 (0 and 2) 2/3 cr.

Purpose: A course in woodwork planned to familiarize agricultural students with the more common tools used in building and repairing of farm equipment. *Principal Topics*: Reading working drawings, making out complete bill of materials, getting out rough stock for a job, measure, laying out lines, squaring up stock, sawing to lines, planing to dimension, making and fastening common joints.

Mr. Marshall

M. E. 14—Foundry—Semester 1 or 2 (0 and 2) 2/3 cr.

Purpose: To give a thorough knowledge of the methods and practices used in the making of ferrous and non-ferrous castings. *Principal Topics*: A study of the materials used in castings; the cupola; moulding sands; cores; patterns; the crucible furnace; the cleaning and inspection of castings. Time is also given to a study of the foundry from an industrial standpoint.

Mr. Philpot

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*On leave 1934-1935.

M. E. 15—Woodwork—Semester 1 or 2 (0 and 2) 2/3 cr.

Prerequisite, Required: M. E. 17, 18.

Purpose: A short course in woodwork consisting of lectures and shop practice for textile students. *Principal Topics*: Hand tools, sharpening tools, planing and squaring to dimensions, construction of common joints, gluing and clamping.

Mr. Marshall

M. E. 17—Woodwork and Pattern Making—Semester 1 or 2 (0 and 6) 2 cr.

Purpose: To give Engineering students a knowledge of the tools and machinery used in woodwork and pattern making. This is accomplished through lectures and shop practice. *Principal Topics*: Hand tools, machine tools on planing and squaring to dimensions, common joints, miscellaneous constructions, gluing and clamping, wood turning, wood finishing, kinds of wood for various uses, source of supply, types of patterns determined by the equipment of foundry and machine shop. Allowances and their effect on patterns, tools used, templets, core prints, pattern construction, core box and corer, skeleton patterns. (*Woodwork and Pattern Making*—Marshall.)

Mr. Marshall

M. E. 21—Metallurgy—Semester 1 or 2 (2 and 0) 2 cr.

Prerequisite, Required: Chemistry 11 and 12; *Suggested*: One year of Physics.

Purpose: To give the student an elementary knowledge of the Metallurgy of Iron and Steel. *Principal Topics*: A study of ores and their sources; fluxes and heating mediums; the operation of the Blast Furnace; the open hearth, the Bessemer Converter; the Crucible Furnace; A study of the various alloys of iron, their production and use. Some time is given to commercial processes of production. Text to be selected.

Mr. Philpot

M. E. 22—Materials of Engineering—Semester 1 or 2 (2 and 0) 2 cr.

Purpose: To give a brief but complete study of the materials used in Engineering and industry. *Principal Topics*: The sources of materials used in industry; a study of wood, concrete, ferrous alloys, non-ferrous materials, brick, tile, and other building materials. This course is designed to help the engineer to select the proper material for any given job. Text to be selected.

Mr. Philpot

M. E. 23, 24—Machine Shop—Semester 1 and 2 (0 and 3) 1 cr.

Prerequisite, Required: Trigonometry, Mechanical Drawing.

Purpose: To give the student a practical knowledge of machine shop methods from the standpoint of the industrial engineer. *Principal Topics*: General application of bench tools. Design, application and methods employed with the lathe, drill, shaper, planer, milling machine and grinder. Study of highly specialized machinery in speed production work and study. Practice in industrial management.

Mr. Freeman

M. E. 31—Mechanics (Statics)—Semester 1 (3 and 0) 3 cr.

Prerequisite: Math 21 and 22, Physics 11 and 12.

Purpose: To strengthen the students in analysis. *Principal Topics*: Analytical methods of solution of statically determinate force systems, with applications to engineering; study of center of gravity and moment of inertia of areas. (*Applied Mechanics*—Poorman.)

Mr. Curtis Mr. Stevenson

M. E. 32—Mechanics (Kinetics)—Semester 2 (3 and 0) 3 cr.

Prerequisite: M. E. 31.

Continuation of Course M. E. 31.

Principal Topics: Study of various types of motion, work, energy, and power, with engineering applications. (*Applied Mechanics*—Poorman.)

Mr. Curtis

M. E. 33—Mechanical Engineering—Semester 1 (3 and 0) 3 cr.

Prerequisite: Math. 21, 22, Physics 21.

Purpose: A general course to familiarize the student with mechanical equipment and its application to the needs of the civil engineer. *Principal Topics*: Study of fuels, combustion, steam, steam engines, boilers, and auxiliaries, gas engines and elementary thermodynamics of the steam and gas cycles.

Mr. Topping

M. E. 33a—Mechanical Laboratory—Semester 1 (0 and 2) 2/3 cr.

Prerequisite: Physics 22.

Purpose: Calibration of instruments, tests of fuels, steam engines and gas engines. *Principal Topics*: Calibration of gauges, study of indicators, tests of coal, lubricating oils, boilers, turbines, steam engines and gas engines.

Mr. Topping

M. E. 34—Mechanical Engineering—Semester 2 (3 and 0) 3 cr.

Prerequisite: Math 21, 22, Physics 21.

Purpose: A general course to familiarize the student with mechanical equipment and its application to the needs of the textile engineer. *Principal Topics*: Study of fuels, steam boilers and auxiliaries, steam and gas engines and elementary thermodynamics of the steam and gas cycles.

Mr. Topping

M. E. 34a—Mechanical Laboratory—Semester 2 (0 and 2) 2/3 cr.

Purpose: Calibration of instruments, tests of fuels, steam engines and gas engines. *Principal Topics*: Calibration of gauges, study of indicators, tests of coal, lubricating oils, boilers, turbines, steam engines and gas engines.

Mr. Topping

M. E.—35—Thermodynamics—Semester 1 (3 and 0) 3 cr.

Prerequisite: Math. 21, 22, Physics 21.

Purpose: A thorough study of the thermodynamics of steam, air heat and refrigeration cycles. *Principal Topics*: Thermodynamic principles and definitions, properties and processes for gases, cycles of heat engines using gas, properties and thermodynamic processes of vapors, vapor cycles, flow of fluids, thermodynamics of refrigeration and compressed air cycles.

Mr. Earle

M. E. 35a—Mechanical Laboratory—Semester 1 (0 and 3) 1 cr.

Prerequisite: Physics 23, 24.

Purpose: To familiarize the student with the instruments used and method of making friction tests on engines. *Principal Topics*: Calibration of gauges, thermometers, study of indicators, analyses of coal, gas, lubricating oils and simple engine tests.

Mr. Topping

M. E. 36—Heat Engines—Semester 2 (3 and 0) 3 cr.

Prerequisite: Math. 21, 22, M. E. 35.

Purpose: A study of mechanical equipment and its application in central station and industrial uses, stress being laid on the thermodynamic feasibility of its use. *Principal Topics*: Fuels, combustion, steam boilers, boiler room auxiliaries, steam engines and turbines with their auxiliaries.

Mr. Earle

M. E. 36a—Mechanical Laboratory—Semester 2 (0 and 3) 1 cr.

Prerequisite: Physics 23, 24, M. E. 35a.

Purpose: A continuation of M. E. 35a. *Principal Topics*: Friction tests and economy tests of steam and gas engines.

Mr. Topping

M. E. 36b—Mechanical Laboratory—Semester 2 (0 and 3) 1 cr.

Prerequisite: Physics 23, 24.

Purpose: To familiarize the student with mechanical equipment and the methods used in testing it. *Principal Topics*: Calibration of instruments, analyses of coal and lubricating oils, simple tests on steam and gas engines.

Mr. Topping

M. E. 38—Industrial Engineering—Semester 2 (2 and 0) 2 cr.

Prerequisite: Machine Shop.

Purpose: To give the student a practical knowledge of the organization, management and operation of the industrial plant. *Principal Topics*: Basic principles, Design of the plant, Organizing the company. Executive control, Operating methods.

Mr. Freeman

M. E. 41—Power Plants—Semester 1 (2 and 0) 2 cr.

Prerequisite: M. E. 35, 36.

Purpose: To study the engineering of power plants. *Principal Topics*: The design and operating characteristics of power plants and of the individual units which make up the power plant, including the economics. Steam, hydro, and Diesel plants.

Mr. Shenk

M. E. 41a—Power Plant Laboratory—Semester 1 (0 and 3) 1 cr.

Prerequisite: M. E. 36b.

Purpose: To put into practice the theory covered in M. E. 41. *Principal Topics*: Tests of turbines, engines, pumps, compressors, boilers, blowers, etc. with formal written reports.

Mr. Fernow

M. E. 42—Hydraulics—Semester 2 (3 and 0) 3 cr.

Prerequisite: M. E. 32.

Purpose: To familiarize students with forces exerted by and flow of water. *Principal Topics*: Theoretical study of pressure measurement, hydrostatic pressures, discharge measuring devices, flow in pipes, flow in open channels; brief consideration of hydrodynamics, hydraulic turbines, and hydraulic power plants. (*Hydraulics*—Daugherty.)

MR. CURTIS

M. E. 42a—HYDRAULIC LABORATORY—Semester 2 (0 and 2) 2/3 cr.

To accompany M. E. 42.

Purpose: Experimental illustration by students of certain devices and principles studied in M. E. 42. Also a limited number exercises on testing of structural materials.

MR. CURTIS

M. E. 42.5—HYDRAULICS—Semester 2 (2 and 0) 2 cr.

Prerequisite: M. E. 32.

An abbreviated form of M. E. 42 without laboratory.

MR. CURTIS

M. E. 43—POWER PLANTS—Semester 1 (3 and 0) 3 cr.

Prerequisite: M. E. 35a, 36a.

The same as M. E. 41 except going into greater detail. (*Power Plant Engineering*—F. T. Morse.)

MR. FERNOW

M. E. 43a—POWER PLANT LABORATORY—Semester 1 (0 and 4) 1 1/3 cr.

Prerequisite: M. E. 35a, 36a.

An amplification of M. E. 41a going into greater detail. (No text.)

MR. FERNOW

M. E. 44—POWER PLANTS—Semester 2 (3 and 0) 3 cr.

Prerequisite: M. E. 43.

A continuation of M. E. 43. (*Power Plant Engineering*—F. T. Morse.)

MR. FERNOW

M. E. 44a—POWER PLANT LABORATORY—Semester 2 (0 and 4) 1 1/3 cr.
A continuation of M. E. 43a. (No text.)

MR. FERNOW

M. E. 45—Gas Engines—Semester 1 (2 and 0) 2 cr.

Prerequisite: M. E. 35, 36.

Purpose: A study of the thermodynamics, construction, and design of internal combustion engines. *Principal Topics*: Theoretical cycles, engine performance, two and four stroke cycles, fuels, combustion, cooling, temperature effects, flywheels, governors, vibration and balancing, engine design.

Mr. Shenk

M. E. 45a—Gas Engine Design—Semester 1 (0 and 3) 1 cr.

Prerequisite: Drawing 26, M. E. 35, 36.

Purpose: The design and layout of an internal combustion engine. *Principal Topics*: To design and make an assembly drawing of an internal combustion engine.

Mr. Shenk

M. E. 46—Steam Turbines—Semester 2 (2 and 0) 2 cr.

Prerequisite: M. E. 35, 36.

Purpose: A study of the principles of operation, construction and design of the steam turbine. *Principal Topics*: Nozzle design, blade design, staging, governing, economy, etc.

Mr. Earle

M. E. 46a—Steam Turbine Design—Semester 2 (0 and 3) 1 cr.

Prerequisite: Drawing 26, M. E. 35, 36. Registration in M. E. 46.

Purpose: To design and layout various parts of the steam turbine. *Principal Topics*: Design of nozzle and blading including assembly and general layout of turbine.

Mr. Sams

M. E. 47—Heating and Ventilation—Semester 1 (2 and 0) 2 cr.

Prerequisite: M. E. 35.

Purpose: To teach the rudiments of central heating system design and construction. *Principal Topics*: Optimum air conditions, heat loss determination, warm air systems, hot water systems, steam, vapor and vacuum systems. Fuels and fuel storage.

Mr. Shenk

M. E. 47a—Heating and Ventilation Design—Semester 1 (0 and 3) 1 cr.

Purpose: To give practical application to the principles of M. E. 47. *Principal Topics*: The design of three heating systems, one residence, one school house and one industrial.

Mr. Shenk

M. E. 48—Heating and Ventilation—Semester 2 (2 and 0) 2 cr.

Prerequisite: M. E. 47.

Purpose: To teach the rudiments of air conditioning. *Principal* Topics: Physiological effects of air conditioning requirements, ventilation equipment, ventilation systems, application of automatic control. Industrial exhaust systems.

Mr. Shenk

M. E. 48a—Heating and Ventilation Design—Semester 2 (0 and 3) 1 cr.

Purpose: To give practical application to the principles of air conditioning systems. *Principal Topics*: The design of three air conditioning systems, viz. one commercial, one industrial and one hospital.

Mr. Shenk

M. E. 49—Mechanics of Materials—Semester 1 (3 and 0) 3 cr.

Prerequisite: M. E. 31.

Purpose: To acquaint students with stresses in structural members and machine parts and certain physical constants. *Principal Topics*: Deformation and stress; torsion; riveted joints; supports, flexure and deflection of beam; combined stress in short blocks; columns. (*Strength of Materials*—Boyd.

Mr. Curtis Mr. Stevenson

M. E. 50—Aerodynamics—Semester 2 (2 and 0) 2 cr.

Prerequisite: M. E. 31 and approval of instructor.

Purpose: To study the forces acting on a plane in flight. *Principal Topics*: History of aviation, aerodynamic theory as applied to airplane design, including calculations of performance and the study of stability and control.

M. E. 51—Refrigeration—Semester 1 or 2 (2 and 0) 2 cr.

Purpose: To teach the application of thermodynamic principles to practical problems in refrigeration. *Principal Topics*: Thermodynamics of refrigeration, heat transfer through building materials and insulation, refrigeration requirements in ice making. meat packing, creamery, cold storage and household refrigeration machinery and systems. Some economic factors of refrigeration.

Mr. Shenk

MILITARY SCIENCE

COLONEL T. S. MOORMAN

CAPTAIN J. P. GAMMON
CAPTAIN J. H. HINWOOD
CAPTAIN G. L. RAMSEY
CAPTAIN A. H. DUMAS
CAPTAIN WAINE ARCHER
STAFF SERGEANT G. E. NARAMOR
SERGEANT H. J. WILKINSON
SERGEANT A. J. KLINE

M. S. 11, 12—MILITARY SCIENCE AND TACTICS—Semester 1 (0 and 3) 1 cr. Semester 2 (1 and 2) 1 cr.

Purpose: To instill discipline and the habit of prompt obedience, and to create leadership ability, while providing basic military instruction. *Principal Topics*: The course includes study of National Defense Act and ROTC, obligations of citizenship, Military History and Policy, Current International Situations, Military Discipline, Courtesy and Customs of the Service, Military Sanitation and First Aid, Military Organization, especially of the Infantry, the theory and practice of Military Map Reading and Rifle Marksmanship, instruction in Command and Leadership, Guard Duty and Ceremonies. Physical drill is also given. (National Service R. O. T. C. Manual, Volume 1.)

COLONEL MOORMAN CAPTAIN GAMMON CAPTAIN HINWOOD
CAPTAIN RAMSEY CAPTAIN DUMAS CAPTAIN ARCHER

M. S. 21, 22—MILITARY SCIENCE AND TACTICS—Semester 1 (1 and 2) 1 cr. Semester 2 (1 and 2) 1 cr.

Prerequisite: M. S. 12.

Purpose: Continuation of disciplinary training, additional stress on leadership, and basic instruction in Infantry Weapons and tactics of the smaller infantry units. *Principal Topics*: This course covers in theory and practice the Automatic Rifle, Characteristics of Infantry Weapons, Scouting and Patrolling, Musketry and Combat Principals of the Rifle Squad and Section; additional Military History, Command and Leadership as would apply to Infantry Corporals and Squad Leaders, physical training and instruction in Guard Duty and Ceremonies. (National Service R. O. T. C. Manual, Volume II.)

CAPTAIN HINWOOD STAFF SERGEANT NARAMOR

M. S. 31, 32—MILITARY SCIENCE—Semester 1 (0 and 3) 1 cr. Semester 2 (0 and 2) 2/3 cr.

Purpose: Training in Discipline and Leadership. Physical development and correction of defects in posture. *Principal Topics*: Drill (Close and Extended Order)—Command and Leadership. Juniors who are not

members of the ROTC receive practical instruction in Military Science and Tactics. Members of the ROTC also take M. S. 33 and 34.

Colonel Moorman Captain Gammon Captain Hinwood
Captain Ramsey Captain Dumas Captain Archer
Staff Sgt. Naramor Sgt. Wilkinson Sgt. Kline

M. S. 33, 34—Military Science and Tactics—Semester 1 (2 and 0) 2 cr. Semester 2 (3 and 0) 3 cr.

Prerequisite: M. S. 22.

Purpose: Theoretical and practical training in weapons and the principles of their combined action; disciplinary and combat training; leadership and training methods; to qualify as instructors. *Principal Topics*: This course consists of practical and theoretical training in Aerial Photograph Reading; Combat Principles of Rifle, Machine Gun and Howitzer Platoons; Pistol and Pistol Marksmanship; Rifle and Rifle Marksmanship; Command and Leadership as would apply to Infantry Sergeants, First Sergeants and Sergeant Majors. Instruction in Guard Duty, Physical Drill and Ceremonies and in the duties of the senior non-commissioned officers. (National Service R.O.T.C. Manual, Volume III.)

Captain Ramsey Captain Dumas

M. S. 41, 42—Military Science—Semester 1 (0 and 3) 1 cr. Semester 2 (0 and 2) 2/3 cr.

Purpose: Training in Discipline and Leadership as applies to the Junior Officer. Physical development and correction of defects of posture. *Principal Topics*: Drill (Close and Extended Order), Command and Leadership. Seniors who are not members of the ROTC receive practical instruction in Military Science and Tactics. Members of the ROTC take M. S. 43 and 44.

Colonel Moorman Captain Gammon Captain Hinwood
Captain Ramsey Captain Dumas Captain Archer
Staff Sgt. Naramor Sgt. Wilkinson Sgt. Kline

M. S. 43, 44—Military Science and Tactics—Semester 1 (2 and 0) 2 cr. Semester 2 (3 and 0) 3 cr.

Prerequisite: M. S. 34.

Purpose: Instruction in Command, Leadership, and Combat Principles; development of initiative and responsibility; Administration and Training Methods; qualification as Junior Officers of the Infantry arm. *Principal Topics*: This course comprises a study of Military History and Policy, Military Law, Company Administration and Supply, Officers Reserve Regulations, Tanks, Anti-Aircraft Defense, Defense against Chemical Warfare, Combat Intelligence, Infantry Signal Communications and Com-

bat Training, and principles of Rifle, Machine Gun and Howitzer Platoons and Companies. Command and Leadership as would apply to Infantry Lieutenants. (National Service R.O.T.C. Manual, Volume IV.)

Colonel Moorman Captain Gammon Captain Archer

MODERN LANGUAGES

Mr. Rhyne

French 11, 12—Beginner's French—Semesters 1 and 2 (3 and 0) 3 cr.

Purpose: To provide the student with a foundation upon which, by subsequent work, he can build up a reading knowledge of French. *Principal Topics*: The fundamentals of grammar with emphasis on pronunciation and the learning of idioms, conversation and dictation. In the second semester a reader will be used.

Mr. Rhyne

French 21, 22—Second-year French—Semesters 1 and 2 (3 and 0) 3 cr.

Purpose: To help the student to build up a reading knowledge of French, to appreciate some of the beauties of French literature, and to read scientific books. *Principal Topics*: Review of grammar, with especial attention to irregular verbs; conversation and dictation continued, prose readings from such authors as Balzac, Daudet, Dumas, Hugo, Loti, Maupassant and Merimee.

Mr. Rhyne

German 11, 12—Beginner's German—Semesters 1 and 2 (3 and 0) 3 cr.

Purpose: To provide the student with a foundation upon which, by subsequent work he can build up a reading knowledge of German. *Principal Topics*: The essentials of German grammar. Stress is laid on pronunciation, conversation, and drill in the fundamental constructions. Dictation is given throughout the year. In the second semester an elementary reader is used.

Mr. Rhyne

German 21, 22—Second-year German—Semesters 1 and 2 (3 and 0) 3 cr.

Purpose: To help the student to build up a reading knowledge of German, to appreciate some of the beauties of German literature, and to read scientific books. *Principal Topics*: Review of grammar; conversation and dictation continued; easy lectures in German; prose readings from such authors as Baumbach, Freytag, Hauff, Storm, and Wildenbruch.

Mr. Rhyne

Spanish 11, 12—Beginner's Spanish—Semesters 1 and 2 (3 and 0) 3 cr.

Purpose: To provide the student with a foundation upon which, by subsequent work, he can build up a reading knowledge of Spanish. *Principal Topics*: The essentials of grammar, pronunciation and drill in the common idioms. Toward the end of the first semester the reading of Spanish texts will be taken up.

Mr. Rhyne

Spanish 21, 22—Second-year Spanish—Semesters 1 and 2 (3 and 0) 3 cr.

Purpose: To help the student to build up a reading knowledge of Spanish, to appreciate some of the beauties of Spanish literature, and to read scientific books. *Principal Topics*: A short review of grammar; rapid readings in modern literary and scientific Spanish.

Mr. Rhyne

Note: Spanish 11, 12 and Spanish 21, 22 are given in alternate years. Spanish 11, 12 will be given in 1935-1936. If the demand is sufficient, third-year courses will be offered in French and German.

PHYSICS

Mr. Godfrey

Mr. Brown Mr. Reed Mr. Hendricks Mr. Huff

Physics 11, 12—General Physics—Semesters 1 and 2 (3 and 2) 3 2/3 cr.

Prerequisite: Algebra, through quadratics, Plane Geometry.

Purpose: To give the student a knowledge of the fundamental principles of physics and to apply these principles to numerous problems. *Principal Topics*: The laws of motion of solids and fluids, heat, thermometry, the principles of electricity and magnetism, sound, and light.

Mr. Godfrey Mr. Hendricks Mr. Huff Mr. Reed

Physics 13, 14—General Physics—Semesters 1 and 2 (3 and 2) 3 2/3 cr. (The same course as Physics 11, 12.)

Physics 21, 22—General Physics—Semesters 1 and 2 (4 and 0) 4 cr.

Prerequisite: Mathematics 11 and 12.

Purpose: To give the student a knowledge of the fundamental theory of physics and the application of the principles to problems in engineering. *Principal Topics*: Mechanics, dynamics, thermometry, heat, magnetism, electricity, sound, and light.

Mr. Brown Mr. Godfrey

PHYSICS 23, 24—LABORATORY PHYSICS—Semesters 1 and 2 (0 and 3) 1 cr.

This course must be taken with Physics 21, 22.

Purpose: To study the application of the theory in physical phenomena, acquire skill in observation and manipulation. *Principal Topics*: Measurement of several physical constants in mechanics, heat, and light; study of electrical measurements and instruments.

MR. BROWN MR. HENDRICKS

PHYSICS 27—GENERAL PHYSICS—Semester 1 (3 and 2) 3 2/3 cr.

Purpose: To study the fundamental principles of Physics as applied to problems in agriculture. *Principal Topics*: Work, power, machines, efficiency, osmosis, surface tension, heat and heat engines, magnetism and electricity, light.

MR. GODFREY

PHYSICS 29—GENERAL PHYSICS—Semester 1 (3 and 4) 4 1/3 cr.

Purpose: A short course for students of agriculture with especial reference to the applications of physics. *Principal Topics*: Force, acceleration, power, machines, heat, light, sound, magnetism and electricity.

MR. REED

PHYSICS 31, 32—MODERN PHYSICS—Semesters 1 and 2 (3 and 0) 3 cr.

Prerequisite, Required: Physics 21, 22; *Suggested*: Mathematics 21, 22.

Purpose: To give the student a general knowledge of the more recent developments in physics; to make him familiar with the modern methods of investigation. *Principal Topics*: Kinetic theory of gases, electron theory, X rays, radio activity, atomic structure, theory of quanta, cosmic rays, geophysics, astrophysics, radio, and television. (*Modern Physics*—Jauncey.)

MR. HUFF

PHYSICS 33—DESCRIPTIVE ASTRONOMY—Semester 1 or 2 (2 and 0) 2 cr.

Prerequisite: General Physics.

Purpose: To give a general knowledge of the facts of astronomy and to study the methods of determining latitude and longitude. *Principal Topics*: Coordinate systems and apparent motions, the planets, the sun and moon, properties of the stars. (*Astronomy*—John Charles Duncan.)

MR. GODFREY

Physics 34—Magnetism and Electricity—Semester 2 (3 and 0) 3 cr.

Prerequisite: Physics 11 and 12.

Purpose: A course primarily for students in Agricultural Engineering. *Principal Topics*: The electric and magnetic field, potential, transformers, properties of transmission lines, storage batteries, properties of vacuum tubes.

Mr. Reed

Physics 35—Mechanics and Properties of Matter—Semester 2 (2 and 0) 2 cr.

Prerequisite: General Physics.

Purpose: A further study of the mechanical properties of matter. *Principal Topics*: The motion of particles and of rigid bodies; gyroscopes; elasticity; surface tension; the flow of fluids; gravitation.

Mr. Huff

Physics 36—Heat—Semester 2 (2 and 0) 2 cr.

Prerequisite: General Physics.

Purpose: To give the student a thorough knowledge of the fundamental principles of heat measurements. Emphasis is placed on chemical applications. *Principal Topics*: Thermometry, calorimetry, change of state, kinetic theory of gases, elements of thermodynamics.

Mr. Hendricks

Physics 37—Sound and Light—Semester 2 (2 and 0) 2 cr.

Prerequisite: General Physics.

Purpose: To study the laws governing the transmission of sound and light. Emphasis is placed on architectural applications. *Principal Topics*: Wave motion; velocity of sound in air and other media; sound in rooms, laws of optics, mirrors, prisms, and lenses; wave nature of light; polarization.

Mr. Brown

POULTRY HUSBANDRY

Mr. Morgan

P. H. 32—Farm and Commercial Poultry Production—Semester 2 (3 and 2) 3 2/3 cr.

Purpose: To study the fundamental principles of poultry production and the factors necessary for profitable flock management as a farm en-

terprise and a commercial business. *Principal Topics*: The nature and uses of poultry products, scope of the industry and agencies involved, classification of poultry, structure of fowl, culling and judging, fundamentals of flock improvement, incubation brooding and feeding principles and practices, poultry house construction, disease control and sanitation and economic aspects of poultry production. (*Poultry Husbandry*—Jull).

MR. MORGAN

P. H. 41—POULTRY JUDGING AND BREEDING—Semester 1 (2 and 2) 2 2/3 cr.

Prerequisite: Poultry Husbandry 32 and Genetics.

Purpose: To give the fundamental principles and practices in judging poultry for production and show; to study the principles of poultry breeding. *Principal Topics*: History and development of culling and judging for production methods, bases of poultry classification and standard judging, inheritance in poultry and improvement of birds through the application of genetic laws. (*Judging Poultry for Production*—Rice, Hall, and Marble; *Poultry Breeding*—Jull.)

MR. MORGAN

P. H. 42—POULTRY PRODUCTION AND MANAGEMENT—Semester 2 (2 and 2) 2 2/3 cr.

Prerequisite: Poultry Husbandry 32.

Purpose: To give detailed study to incubation and brooding principles and practices; to study the effects of various feeds and rations; study of management practices. *Principal Topics*: Temperature, humidity, and ventilation in relation to incubation, incubator operation, brooding and rearing methods, feeds and rations for baby chicks, growing stock, breeding stock and laying hens, effects of feeds and rations on the character and quality of poultry products, poultry farm layout and management. (*Research Bulletins and Scientific Literature*)

MR. MORGAN

*RELIGION**

MR. CROUCH

MR. GOODE MR. SATTERLEE MR. SMITH

RELIGION 21, 22—OLD TESTAMENT—Semesters 1 and 2 (2 and 0) 2 cr.

Free elective for Sophomores. Others admitted by permission.

Purpose: To discover a reasonable method of interpretation of the Old Testament and its inspiration. *Principal Topics*: Definitions, inspiration, the chronology of the Old Testament, the Old Testament's

*This work is not financed by the College; it is offered as free elective.

story of its own writing, great characters of the Old Testament, development of ideas in the Old Testament.

Mr. Satterlee

Religion 23, 24—Life of Christ—Semesters 1 and 2 (2 and 0) 2 cr.

Free elective for Sophomores. Others admitted by permission.

Purpose: To acquaint the student with the facts in the life of Christ in the order of their occurrence. *Principal Topics*: Historical study of the Gospels: their parallelism; the similarity and differences in the four narratives; brief glance at synoptic criticism; authorship and historical value of the Gospel of John; the measure of the importance and influence of facts studied; and a brief analysis of the more important of Christ's discourses. (*A Harmony of the Gospels*—Robertson.)

Mr. Goode

Religion 31, 32—New Testament Outline—Semesters 1 and 2 (2 and 0) 2 cr.

Free elective for Juniors. Others admitted by permission.

Purpose: To study the beginning and the spread of Christianity during the New Testament period. *Principal Topics*: Conditions in the Roman world at the beginning of the Christian era; those factors which later aided in the spread of the Gospel; a study of the life and works of Jesus Christ, as the Founder of Christianity, according to Matthew's Gospel; the spread of the Gospel as contained in the Acts of the Apostles and the Epistles.

Mr. Crouch

Religion 41, 42—Comparative Religions—Semesters 1 and 2 (2 and 0) 2 cr.

Free elective for Seniors. Others admitted by permission.

Purpose: To define religion; to appreciate religion as one of the oldest institutions of life; to study and compare ancient and modern religions of mankind. *Principal Topics*: The nature of religion, animistic religion, religions of Egypt and Mesopotamia, religions of Greece and Rome, Zoroasterianism, Hinduism, Buddhism, religion of the Chinese, religion of the Japanese, Judaism, Mohammedanism, Christianity. (*The Religions of Mankind*—Soper.)

Mr. Smith

SOCIOLOGY AND PSYCHOLOGY

MR. BREARLEY

SOCIOLOGY 31—ELEMENTARY SOCIOLOGY—Semester 1 or 2 (2 and 0) 2 cr.

Prerequisite: Junior standing.

Purpose: To give an introduction to sociology and contemporary social problems. *Principal Topics*: Group behavior, the family, population problems, race relations, dependency, crime. (*Introduction to Sociology*—Bogardus.)

MR. BREARLEY

SOCIOLOGY 32—THE FAMILY—Semester 2 (2 and 0) 2 cr.

Prerequisite: Sociology 31.

Purpose: To assist the student in developing perspective concerning the problems of marriage and family life. *Principal Topics*: History of the family, social problems of the family, conservation of the family, sources of failure and success in marriage. (*The American Family*—Groves.)

MR. BREARLEY

SOCIOLOGY 43—CRIMINOLOGY—Semester 1 (3 and 0) 3 cr.

Prerequisite: Sociology 31.

Purpose: To introduce the student to the principal problems of crime and its treatment. *Principal Topics*: The nature and sources of crime, the administration of criminal justice, systems of penology. (*The Problem of Crime*—Ettinger.)

MR. BREARLEY

SOCIOLOGY 44—ADVANCED SOCIOLOGY—Semester 2 (3 and 0) 3 cr.

Prerequisite: Sociology 31 and permission of the instructor.

The purpose and topic of this course will be adjusted to the interests of the class and will vary from year to year.

MR. BREARLEY

PSYCHOLOGY 35, 36—PSYCHOLOGY FOR TEACHERS—Semesters 1 and 2 (2 and 2) 3 cr. each semester.

Prerequisite: Junior standing.

Purpose: To acquaint students of education and others with some fundamental characteristics of human behavior. *Principal Topics*: Physiological bases of behavior, mental growth, the emotions and their expression, the learning process, individual differences and their measurement, personality, problem children, abnormal behavior. (*Psychology for Students of Education*—Gates; *The Psychology of the Unadjusted School Child*—Morgan.)

Mr. Brearley

Psychology 45—Abnormal Behavior—Semester 1 (2 and 0) 2 cr.

Prerequisite: Psychology 35, 36.

Purpose: To develop a general knowledge of abnormal behavior. *Principal Topics*: Mental defect, the psychoses and psychoneuroses, psychopathic personalities.

Mr. Brearley

Psychology 46—Social Psychology—Semester 2 (2 and 0) 2 cr.

Prerequisite: Psychology 35, 36.

Purpose: To study the social behavior of the individual. *Principal Topics*: The development of personality, social stimulation, crowd behavior, pro-social and anti-social conduct.

Mr. Brearley

TEXTILE CHEMISTRY AND DYEING

Mr. Manning Mr. Huckabee

T. C. 31 and 32—Textile Chemistry—Semesters 1 and 2 (2 and 2) 2 2/3 cr.

Prerequisiste: Chemistry 12.

Purpose: This course is designed to give the student the general knowledge of the subject that is essential to the management of any modern textile plant. *Principal Topics*: A general introduction into the theory of textile chemistry. Particular attention is given to the textile fibers, dyestuffs, and organic compounds used in the textile and related industries. (*Introduction to Organic Chemistry*—Lowy and Harrow; *T. C. Mimeograph Notes.*)

Mr. Huckabee

T. C. 33 and 34—Technical Writing—Semesters 1 and 2 (1 and 0) 1 cr.

Purpose: A course designed to familiarize the student with the technical literature. *Principal Topics*: Patents, particularly in the field of chemistry as applied to textiles, dyes, dyeing, finishing, rayon, and related subjects; literature searches; abstracting of technical literature and patents; report writing; technical nomenclature, etc.

MR. MANNING

T. C. 35 and 38—TEXTILE CHEMISTRY—Semesters 1 and 2 (4 and 3) 5 cr.

Prerequisite: Chemistry 12, 23, and 24.

Purpose: To connect the theories of organic chemistry with the practical work in the various branches of the textile and related industries. *Principal Topics*: A systematic and thorough course of organic chemistry with special emphasis upon every phase of the subject which touches any branch of the textile industry. Particular attention is given to the aromatic series and the more complex compounds, such as proteins (wool and silk); carbohydrates (starches and cellulose); azo, anthraquinone and other complex compounds (dyestuffs); enzymes and ferments (desizing products); etc. (*Organic Chemistry*—Chamberlain; *T. C. Mimeograph Notes.*)

MR. MANNING

T. C. 39 AND 40—DYEING—Semesters 1 and 2 (0 and 2) 2/3 cr.

Purpose: A laboratory course in dyeing with occasional lectures, intended primarily for students specializing in Weaving and Design or Yarn Manufacture. *Principal Topics*: The methods of bleaching and dyeing the different types of fibers are taught through laboratory experiments. Color-matching and evaluation of dyestuffs are considered briefly. (*T. C. Mimeograph Notes.*)

MR. HUCKABEE

T. C. 41 and 42—TEXTILE CHEMISTRY AND DYEING—Semesters 1 and 2 (2 and 2) 2 2/3 cr.

Prerequisite: Textile Chemistry 32, 38.

Purpose: This course is designed to give Textile Engineers a general knowledge of the subject. *Principal Topics*: A general study of the chemistry of the textile fibers, dyestuffs and their application, detergents and scouring, bleaching, size preparation and its application, desizing, mercerizing, finishing, etc. While covering all of the fibers, particular attention is given to cotton. (*Dyeing with Coal Tar Dyestuffs*—Whittaker; *T. C. Mimeograph Notes.*)

MR. HUCKABEE

T. C. 41.5 and 42.5—Textile Chemistry and Dyeing—Semesters 1 and 2 (4 and 4) 5 1/3 cr.

Prerequisite: Textile Chemistry 38 or Chemistry 36.

Purpose: An advanced course in the subject for those desiring to become textile chemists or dyers. *Principal Topics*: This course comprises a full and complete study of the textile fibers, the action of the various reagents upon them, and the various processes through which they pass in the different stages of textile manufacture. Application of dyes to the different classes of textile fibers is fully covered in the laboratory by the usual dyepot experiments, and also by larger scale dyeings. (*Dyeing with Coal Tar Dyestuffs*—Whittaker; *The Dyeing of Textile Fibers*—Horsfall and Lawrie; *T. C. Mimeograph Notes.*)

Mr. Manning

T. C. 43—Cellulose Chemistry—Semester 1 (2 and 0) 2 cr.

Prerequisite: Textile Chemistry 35.

Purpose: To give the student a thorough knowledge of the latest theories regarding the constitution of our most common and important textile fiber. *Principal Topics*: A study of the chemistry of cellulose based upon the latest research. The various cellulose derivatives are included. (*Chemistry of Cellulose and Wood*—Schorger.)

Mr. Manning

T. C. 45 and 46—Analysis of Textile Materials—Semesters 1 and 2 (1 and 3) 2 cr.

Prerequisite: Chemistry 24 and Textile Chemistry 38.

Purpose: To prepare the student to make analyses pertaining to the materials used in the textile and related industries. *Principal Topics*: The technical analysis of the various chemicals and materials used in the textile industry, including yarns and fabrics, water, soap, sizes, finishes, oils, etc., and hydrogen ion determinations by the colorimetric and potentiometric methods. (*Textile Analysis*—Trotman.)

Mr. Manning and Staff

T. C. 47 or 46.5—Microscopy of Textile Materials and Chemicals—Semester 1 or 2 (1 and 1) 1 1/3 cr.

Purpose: This course is especially planned to enable the student to utilize this valuable means of investigation in the textile and related industries. *Principal Topics*: The preparation of the various materials used in the textile industry for microscopic examination, photo-micrography, micrometry, etc. (*Textiles and the Microscope*—Schwarz; *T. C. Mimeograph Notes.*)

Mr. Huckabee

T. C. 48—Synthetic Fiber Chemistry—Semester 2 (2 and 0) 2 cr.

Prerequisite: Cellulose Chemistry.

Purpose: To equip the student with the knowledge essential to the undertaking of work in the synthetic fiber industry. *Principal Topics*: A study of the chemistry and mechanics involved in the manufacture of the various synthetic fibers; the chemical, physical and textile properties of the various products, etc. (*Artificial Silk*—Reinthaler and Rowe; *T. C. Mimeograph Notes.*)

Mr. Manning

T. C. 50 and 51—Thesis—Semesters 1 and 2 (0 and 3) 1 cr.

Purpose: To determine the ability of the student to initiate and satisfactorily complete an advanced problem generally related to some work he wishes to pursue after graduation. *Principal Topics*: An investigation of an assigned problem relating to textile chemistry, dyes or dyeing, including the preparation of a written report of this work. Where the student has already decided upon some work which he will follow after graduation, an effort is made to assign the investigation to this or a closely related subject.

Mr. Manning

Division Rooms and Equipment.—All work in textile chemistry and dyeing is conducted in the special class room, laboratory and dye house especially provided for this purpose.

Besides the usual dyeing laboratory equipment, the dye house contains a hydroextractor, Franklin process and Columbus package dyeing machines, one of which is also suitable for bleaching purposes, a Hussong skein dyeing machine, a jigger, a printing machine, a Permutit water softening system, fadeometer, spectroscope, potentiometric and colorimetric hydrogen ion concentration determination equipment, special rubber-lined rayon dyeing equipment, spray printing equipment, launder-o-meter, Rodney Hunt kier; Rodney Hunt piece goods dyeing machine; monel metal tanks; Strickland monel metal hosiery dyeing machine; Philadelphia Metal Drying Forms for hosiery, etc.

VETERINARY SCIENCE

Dr. Feeley

Vet. Sci. 41—Anatomy and Physiology—Semester 1 (2 and 2) 2 2/3 cr.

Purpose: To give agricultural students a general knowledge of anatomy and physiology of farm animals. *Principal Topics*: Physiology of digestion, farm sanitation, chemical and physical processes of digestion

and absorption, common diseases and first aid treatment. (*Veterinary Science*—Hadley)

Mr. Feeley

Vet. Sci. 42—Diseases of Animals—Semester 2 (2 and 2) 2 2/3 cr.

Purpose: To give agricultural students instruction in the recognition of, causes and treatment of diseases of farm animals. *Principal Topics*: The principles of etiology, pathology, diagnosis, symptoms and treatment of infectious and non-infectious diseases.

Mr. Feeley

VOCATIONAL EDUCATION

Mr. Washington

Mr. Crandall Mr. Monroe Mr. Johnson Mr. Booker
Mr. Tate Mr. Stribling Mr. Bowen Mr. Brock
*Mr. Ayers *Mr. Klutts

Voc. Ed. 11—Orientation—Semester 1 (1 and 0) 1 cr.

Purpose: To aid the freshman in adjusting himself to the College environment and his course of study.

Mr. Washington Mr. Crandall Mr. Booker Mr. Tate

Voc. Ed. 20—Introduction to Education—Semester 1 (2 and 0) 2 cr.

Purpose: To develop a broad concept of education and a comprehensive view of the scope and opportunities in teaching, to set up desirable outcomes of education and to develop a desire for professional growth. *Principal Topics*: Scope, meaning, and significance of education, more significant aspects of teaching, teaching and learning principles, efficient study procedure, professional education's contributions to successful work of teacher, teacher personality traits, individual differences and teaching, outcomes of education, status of teaching profession, major problems of education.

Mr. Brock

Voc. Ed. 22—Introduction to Vocational Education—Semester 2 (1 and 0) 1 cr.

Purpose: To introduce the student to the field of education as a whole and to develop a background for further educational training. *Principal Topics*: The place of vocational education in the educational system, the subject matter fields related to the vocation for which the student is planning to become a teacher, the place of the teacher in the community.

Mr. Crandall Mr. Tate

*On leave.

VOC. ED. 28—OBSERVATION OF INDUSTRIAL TEACHING—Semester 2 (0 and 3) 1 cr.

Purpose: To give the student a practical acquaintance with the duties of the industrial arts teacher.

MR. TATE OR MR. BROCK

VOC. ED. 31—INTRODUCTION TO AGRICULTURAL EDUCATION—Semester 1 (1 and 6) 3 cr.

Purpose: To familiarize students with the work of teachers of agriculture in local communities. *Principal Topics*: Students observe and report on the work of all-day, part-time, evening and day unit classes, community and promotional work, equipment and general organization of a program in agricultural education for a local community. Each trainee develops several units of teaching content and instructs classes in vocational agriculture. Students spend two afternoons each week in the practice department.

MR. CRANDALL MR. MONROE MR. STRIBLING MR. JOHNSON MR. BOWEN

VOC. ED. 31.6, 32.6—SPECIAL METHODS IN INDUSTRIAL ARTS—Semesters 1 and 2 (2 and 2) 2 2/3 cr.

Purpose: To give the student fundamental skills, knowledges, and shop content in woodwork, to give the special technique and method of approach in teaching shop subjects in high schools. *Principal Topics*: Project construction, finishing, construction and care of shop tools and equipment, materials, characteristics of woods, fasteners, finishing materials, glues, the shop budget. The above topics are taken up from the standpoint of most progressive methods of shop teaching in industrial arts.

MR. MARSHALL

VOC. ED. 35—PSYCHOLOGY FOR TEACHERS—Semester 1 (2 and 2) 3 cr.

(See Psychology 35).

Purpose: To acquaint students of education and others with some fundamental characteristics of human behavior. *Principal Topics*: Physiological bases of behavior, mental growth, the emotions and their expression, the learning process, individual differences and their measurement, personality, problem children, abnormal behavior. (*Psychology for Students of Education*—Gates; *The Psychology of the Unadjusted School Child*—Morgan.)

MR. BREARLEY

VOC. ED. 33—ORGANIZATION OF COURSES OF STUDY—Semester 2 (3 and 0) 3 cr.

Purpose: To have students build industrial courses based upon specific analyses of the jobs to be taught, and to have students use these courses in teaching. *Principal Topics*: Purpose, scope and use of job analyses in writing courses of study, writing and using instruction sheets for teaching, constructing achievement tests in industrial subjects. The student is required to select some industrial subject and write a course of study based upon analyses of jobs covered under that subject. Prospective teachers are urged to select subjects which they will later teach.

Mr. Brock

Voc. Ed. 34—Problems in Agricultural Education—Semester 2 (3 and 0) 3 cr.

Purpose: To familiarize students with history and development of vocational agricultural education and develop a sound philosophy toward vocational agricultural education in the public school system. *Principal Topics*: Federal and State Acts providing for vocational education, functions of various professional organizations, functions of the state and national organizations for agricultural students, the need of vocational agriculture in the rural high schools, relation of vocational agriculture department to other departments in high schools, current thought on the part of leading educators for meeting the needs of rural people, and experimental results in education.

Mr. Monroe

Voc. Ed. 33.5, 34.5—Art Metal Work—Semester 1 and 2, 1—3 cr.

Purpose: This course is mainly for industrial education students and others who plan to teach art metal courses in public schools and who would like to become acquainted with the making of plates, letter openers, trays, bowls, and metal-working tools. To study methods of teaching and methods of introducing art metal work in the public schools. *Principal Topics*: The obtaining of tools and materials, organizing the class, methods of teaching, making wooden mallets, forming blocks, actual making of objects, teaching art metal work to selected students.

Mr. Brock

Voc. Ed. 37—Rural and Village School Problems—Semester 1 (3 and 0) 3 cr.

Purpose: To introduce the student to the problems facing a teacher in rural and small town schools, and from this to determine the qualifications necessary for a successful teacher. *Principal Topics*: Correlation of the curriculum with the desirable social trends in agricultural and industrial communities, the summer session, transportation problems, special qualifications of teachers.

Mr. Monroe

Voc. Ed. 38—Teaching of Drawing—Semester 2 (2 and 2) 3 cr.

Prerequisite: Drawing 14 (or equivalent)

Purpose: To train for the teaching of drawing and the understanding of some of the elements of the subject. *Principal Topics*: Psychology as applied to the subject, planning the layout of suitable course to meet group needs, some of the arts and sciences used in drawing, fitness of teacher and student in class work, vocational direction in this field, methods, reading of drawings, grades and grade methods. (Reference texts used as assigned.)

Mr. Klugh

Voc. Ed. 39—Principles of Secondary Education—Semester 1 (3 and 0) 3 cr.

Purpose: To give prospective teachers the results of experience, research and thinking in education which form the basis of sound practice in teaching high school subjects. *Principal Topics*: Characteristics and need of education, characteristics of learning, knowledge and thinking ability, motor, moral and appreciative reactions, choice of subjects and activities, influence of age, maturity, and individual differences, methods of teaching, appraising results of education.

Mr. Tate

Voc. Ed. 40—Practice Teaching in Agriculture—Semester 2 (0 and 15) 5 cr.

Purpose: To give the students an opportunity to discharge the duties and responsibilities of an agricultural teacher in a local community. *Principal Topics*: Students participate in all-day, part-time, evening class and day unit work. Habits, attitudes, ability to assume responsibility, promptness, general reliability, and degree of skill developed are some of the factors considered in rating the student as a prospective teacher. Students spend five afternoons a week in the practice schools.

Mr. Crandall Mr. Monroe Mr. Stribling Mr. Johnson Mr. Bowen

Voc. Ed. 41—Principles of Vocational Education—Semester 1 (1 and 9) 4 cr.

Purpose: To instruct students in principles and methods in connection with practice teaching. *Principal Topics*: Emphasis is placed on the participation of students in all possible phases of the work of a teacher of agriculture in a local community. Students organize and teach all-day, part-time, evening and day unit classes. Students are held responsible for definite phases of community and promotional work.

Mr. Crandall Mr. Monroe Mr. Stribling Mr. Johnson Mr. Bowen

Voc. Ed. 42—Methods in Agricultural Education—Semester 2 (3 and 0) 3 cr.

Purpose: Problems and difficulties that arise in practice teaching receive special emphasis in this course. *Principal Topics*: A thorough survey is made of teaching content for all-day, part-time and evening class students. Students make careful analyses of conditions and practices of farming in a local community as a source of teaching content. Other sources of teaching content which receive emphasis in this course are data from experiment stations and the United States Department of Agriculture.

Mr. Crandall

Voc. Ed. 43 and 44—Practice Teaching in Industrial Subjects—Semesters 1 and 2 (0 and 10) 5 cr.

Purpose: To develop through supervised practice teaching those techniques, attitudes, and principles universally valuable in teaching, to give prospective teachers experience in handling problems in the school. *Principal Topics*: Organizing class, selection of teaching materials, planning work, discipline, teaching methods, examinations and grading, cooperation with school personnel, records and reports, inventories, and upkeep of equipment. Each student teacher periodically is given an opportunity to teach some industrial subject. During his teaching period he is responsible for his class just as if he were an employed teacher of that subject.

Mr. Tate Mr. Brock

Voc. Ed. 45—Teaching Science—Semester 2 (3 and 0) 3 cr.

Purpose: To familiarize students with the objectives and methods of science instruction in public schools. *Principal Topics*: Project method of teaching science, aims and values of science instruction, teaching content, classroom procedure, and relationship of science instruction to the general and vocational courses and to administrative procedures.

Mr. Crandall

Voc. Ed. 46—Technique of Teaching—Semester 2 (3 and 0) 3 cr.

Purpose: To acquaint the prospective teacher with the most significant problems in industrial teaching, to propose solutions for those problems consistent with most authoritative information available. *Principal Topics*: Shop planning, organizing classes, selection of equipment and tools, ways of securing materials and supplies for school shop, introducing a shop program, financing a shop program, advertising a shop program, methods of teaching, and discipline.

Mr. Brock

Voc. Ed. 47—History and Philosophy of Education—Semester 2 (2 and 0) 2 cr.

Purpose: To acquaint the student with the historical development of education and to develop an appreciation for the contributions of the various leaders in education. *Principal Topics*: Education in the Orient, early European education, the contributions of Plato, Luther, Locke, Rousseau, Spencer, Herbart, Dewey and others. The development of public education in South Carolina, special attention given to the social significance of the school.

Mr. Washington

Voc. Ed. 48—Teaching of Physics and Mathematics—Semester 2 (3 and 0) 3 cr.

Purpose: To train the prospective teacher in building an appropriate course of study of the methods of teaching, the equipped laboratory and the use of local industries in teaching the principles and applications of physics and mathematics. *Principal Topics*: The purpose of physics and mathematics in the high school course, project planning, lesson planning, analysis of adopted textbooks, supplementary teaching materials and equipment, conduct of the recitation, grading, class management and discipline.

Mr. Brown

Voc. Ed. 49—Health and Physical Education—Semester 1 (2 and 0) 2 cr.

Purpose: To fit men for teaching and supervising courses in physical education in public schools and other community organizations to the end of fostering better health for all. *Principal Topics*: Anatomy, osteology, and physiology, the recognition of defects and the study of corrective measures through posture, diet, health habits, etc. Attention is also given to the physiological basis of conditioning of athletes, first aid, care of the injured, personal and administrative school hygiene, the recognition of common communicable diseases.

Dr. Milford

Voc. Ed. 50—Problems in Advanced Woodwork for Teachers—Semesters 1 and 2 (1 and 2) 1 2/3 cr.

Mr. Marshall

Voc. Ed. 51—Practice Teaching in High School Subjects—Semesters 1 and 2 (0 and 6) 3 cr.

Purpose: To give supervised practice in teaching general science, chemistry, mathematics, civics, etc. in order to develop skill in the best methods of teaching these subjects. (Enrollment is by individual approval.) *Principal Topics*: Selection of subject matter, planning work,

methods of teaching, examinations and grading, discipline, cooperation with school personnel, records and reports. When possible the student teacher is allowed to teach his subject of greatest interest. During his teaching period he is under close supervision and is held fully responsible for his class.

Mr. Tate

Voc. Ed. 53—Practice Teaching in Evening Classes—Semesters 1 and 2 (0 and 2) 1 cr.

Purpose: To give the prospective industrial teacher practice in organizing trade and industrial evening classes, organization of suitable instructional material and the actual teaching of such classes. *Principal Topics*: Organization of classes, selection of teaching material, planning work, co-operation with industry, reports and records, and follow-up.

Mr. Tate Mr. Brock

Voc. Ed. 56—Educational and Vocational Guidance—Semester 2 (3 and 0) 3 cr.

Purpose: Study of meaning, purpose and aim of guidance, methods of investigation in guidance, methods of guiding students, results of guidance. Each student will set up a program of guidance suitable for a typical school system. *Principal Topics*: Need, meaning, basic assumptions, aims and objectives of guidance, general methods of investigation, use of school records, exploratory activities, tests, estimates of personality traits and self analysis as methods of studying individual, methods of securing and assembling facts about courses of study in educational instruction, methods of study of occupations, guidance of students in choice of occupation, choice of training and organization of guidance.

Mr. Tate

Voc. Ed. 57—High School Coaching—Semester 1 (2 and 0) 2 cr.

Purpose: To train prospective high school coaches in the fundamentals of developing individuals and teams. *Principal Topics*: Emphasis is given to educational value of clean sports and particular attention is given to the physical condition of the student body, conditioning and training for competitive participation in football, basketball, and baseball.

Mr. Neely

Voc. Ed. 59—Administration of Vocational and Other Schools—Semester 1 (3 and 0) 3 cr.

Purpose: To acquaint the prospective teacher with modern administration technique in public education. *Principal Topics*: The public school curriculum, the administration of vocational departments, the duties

of the principal and his relationship to the school board, etc. Attention will also be given to certain legal phases of school administration.

Mr. Washington Mr. Stribling

Voc. Ed. 100—Special Problems in Education—Semesters 1 and 2 1-5 cr. (enrollment by individual permission.)

Purpose: To provide an opportunity for persons needing special assistance in meeting emergency or unusual situations in educational work.

Students who enter this course are required to provide their own transportation in connection with field work.

WEAVING AND DESIGNING

Mr. Shinn

Mr. McKenna Mr. Cartee

W. D. 12—Textiles—Semester 1 and 2 (1 and 2) 1 2/3 cr.

Purpose: To give the student a general background for the work which follows, and enable him to see the industry as a whole. *Principal Topics*: Elementary studies of weaving, designing, warping and slashing. (*Beam Warpers, Slashers, Northrup looms—International Textbook Company; W. D. Mimeograph Notes.*)

Mr. McKenna Mr. Cartee Mr. Rouse

W. D. 21—Elementary Design—Semester 1 (2 and 0) 2 cr.

Prerequisite, Suggested: W. D. 12, Textiles.

Purpose: To give thorough instruction in the construction of the fundamental weaves and their derivatives. *Principal Topics*: Plain, twill, and sateen weaves, derivatives, harness and chain drafts, principles of color harmony. (*Technology of Textile Design,* Posselt; *W. D. Mimeograph Notes.*)

Mr. McKenna

W. D. 22—Advanced Design—Semester 2 (2 and 0) 2 cr.

Prerequisite, Required: W. D. 21, Elementary Design.

Purpose: To instruct the student in constructing weaves for the more intricately woven fabrics. *Principal Topics*: Extra warp and filling for weight and figure, double cloths, velvets, plushes, corduroys, and turkish toweling. (*Technology of Textile Design,* Posselt; *W. D. Mimeograph Notes.*)

Mr. Shinn Mr. McKenna

W. D. 23—Weaving—Semester 1 (0 and 2) 2/3 cr.

Prerequisite: W. D. 12, Textiles.

Purpose: To give the student thorough training in the operation, construction, and adjustment of loom mechanisms. *Principal Topics*: Analytical study of the loom, the shedding motion, design of shedding cams, the picking motion, the beating-up motion, the take-up motion, take-up calculations, let-off mechanisms, the filling stop motion, batteries, automatic loom adjustment. (*W. D. Mimeograph Notes.*)

Mr. Shinn

W. D. 24—Weaving—Semester 2 (0 and 3) 1 cr.

Prerequisite: W. D. 23, Weaving.

Purpose: To give the student instruction in fabric production on the more advanced types of looms with special cams and attachments. *Principal Topics*: Mechanical warp stop motions, electrical warp stop motions, filling feelers, thread cutters, shuttle change mechanisms, selvage motions, side cam motions, loom fixing. (*W. D. Mimeograph Notes.*)

Mr. Shinn

W. D. 26—Weave Room Problems—Semester 2 (3 and 0) 3 cr.

Prerequisite, Required: W. D. 12.

Purpose: To apply the fundamental principles of mathematics to weave room problems. *Principal Topics*: Mechanical calculations of the loom, the theoretical and practical production of the loom, yarn calculations, beam calculations, fabric calculations, loom equipment and slasher problems. (*Weave Room Calculations*—Clark; *Cotton Mill Calculations*—Smith and Quigley; *W. D. Mimeograph Notes.*)

Mr. Cartee

W. D. 31—Dobby Design—Semester 1 (2 and 0) 2 cr.

Prerequisite: W. D. 21, Elementary Design.

Purpose: To give instruction in the derivation of the specifications and drafts necessary for the production of fabrics on the dobby loom. *Principal Topics*: Ratio of intersections; methods of combining weaves; laying out weaves for figures, stripes, and checks, dressing and beaming plans; harness, reed, and chain plans. (*W. D. Mimeograph Notes.*)

W. D. 32—Advanced Dobby Design—Semester 2 (2 and 0) 2 cr.

Prerequisite: W. D. 31, Dobby Design.

Purpose: To give the student training in designing the more advanced types of dobby-woven fabrics. *Principal Topics*: Weaving specifications

for handkerchiefs, clip-spot fabrics, double cloths, composition of original dobby patterns. (*W. D. Mimeograph Notes.*)

Mr. McKenna

W. D. 33, 34—Fabric Analysis—Semester 1 (0 and 2) 1 cr. Semester 2 (0 and 2) 1 cr.

Prerequisite: W. D. 11, Suggested, W. D. 21 and 22.

Purpose: To give the student a thorough knowledge of the analysis of fabrics as they come to the mill for reproduction. *Principal Topics*: Methods of determining yards per pound from a small sample or yarn counts. Overall and ground construction; selection of yarn counts; determining the design, drawing-in-draft, chain draft, and reed plan. Warp dressing plan. Cotton, wool, silk and rayon fabric. (*W. D. Mimeograph Notes.*)

Mr. Cartee

W. D. 35—Fancy Loom Fixing—Semester 1 (1 and 2) 1 2/3 cr.

Purpose: To give the student an understanding of the principles of operation, timing and settings of the dobby and drop box looms. *Principal Topics*: A study of harness settings for various types of patterns; setting and timing of cylinder, knives, crankshaft, box motion, hooks, and chains; building box chains, pattern chains, and multiplier chains; weaving fabrics from original chains. (*Dobbies; Box Motions; Dobby and Dobby Multipliers; W. D. Mimeograph Notes.*)

Mr. Cartee

W. D. 36—Fancy Loom Fixing—Semester 2 (0 and 2) 2/3 cr.

Prerequisite, Required: W. D. 23 and 24; *Suggested*, W. D. 35.

Purpose: To give practical instruction in the timing and setting of special motions used on dobby and box looms. *Principal Topics*: Double cylinder dobbies, rocking cylinder motion, two weave motion; center filling stop motion; automatic stationary magazines; four chain multipliers, warp striper, and feeler motion. (*Crompton and Knowles Bulletins, W. D. Mimeograph Notes.*)

Mr. Cartee

W. D. 37—Rayon Processing—Semester 1 (1 and 2) 1 2/3 cr.

Prerequisite: Open to juniors and seniors in the textile school.

Purpose: To instruct the student in the processes of rayon warp preparation and in the weaving of rayon fabrics. *Principal Topics*: Rayon yarns classified according to the processes used in their manufacture; physical properties of the rayons and their relation to processing;

winding, warp, and slashing; sizing materials and formulae; rayon weaving. (*Rayon Processing,* Shinn)

Mr. Shinn

W. D. 41—Jacquard Weaving—Semester 1 (1 and 2) 1 2/3 cr.

Purpose: To give instruction in the operation and mechanism of the Jacquard machine and complementary equipment. *Principal Topics*: Types of Jacquard machines; types and methods of harness building; designs for different tie-ups; card cutting and lacing; Jacquard machine fixing. (*Jacquards, International Textile Book Company, W. D. Mimeograph Notes.*)

Mr. McKenna

W. D. 42—Jacquard Design—Semester 2 (1 and 4) 2 1/3 cr.

Purpose: To give instruction in the design of fabrics of artistic value for decorative purposes. *Principal Topics*: Application of the principles of decorative design; derivation of original designs by the use of color, weave, and form; pattern enlargement; card cutting and lacing; sample weaving. (*W. D. Mimeograph Notes.*)

Mr. McKenna

W. D. 43—Cost Finding—Semester 1 (3 and 0) 3 cr.

Prerequisite: Open to juniors and seniors in the textile school.

Purpose: To teach the fundamentals of correct cost finding procedure and the control of manufacturing costs. *Principal Topics*: Standard costs; cost control; valuing the inventory; material costs; labor budgets; distribution of fixed charges; departmental processing costs, determining the costs of individual yarns and fabrics; cost reports. (*Computing Cotton Fabric Costs,* Hill; *A Method of Predetermining Costs in Cotton Yarn Mills,* Munroe; *W. D. Mimeograph Notes.*)

Mr. Shinn

W. D. 44—Leno Design and Warp Preparation—Semester 2 (2 and 0) 2 cr.

Prerequisite: W. D. 31, 33, and 34.

Purpose: To give the student thorough instruction in the structure of cross-woven fabrics and the methods employed in their design and production, and in the practice of warp preparation. *Principal Topics*: Mechanisms for leno weaving; simple leno fabrics; fancy leno on one set of doups; the slotted doup; three-end leno; full turn leno; advanced fabric styling. Starches; sizes; slashing methods; warping machinery. (*Fundadamentals of Leno Weaving*—Shinn and McKenna; *W. D. Mimeograph Notes.*)

Mr. Shinn

W. D. 45, 46—Pattern Weaving—Semester 1 and 2 (0 and 2) 2/3 cr.

Purpose: To coordinate the principles taught in the fundamental courses of the Weaving and Designing Department. *Principal Topics*: The student will be required to design and produce to specifications one fancy cloth each semester and submit reports covering their design and analysis. (*W. D. Mimeograph Notes.*)

Mr. McKenna

W. D. 45.5, 46.5—Advanced Pattern Weaving—Semesters 1 and 2 (0 and 6) 2 cr.

Prerequisite: W. D. 31, 32, 33, and 34.

Purpose: This course is arranged especially for students in textile design with the objective of giving the student more time to apply the principles of design in the production of fancy fabrics. *Principal Topics*: The student will be required to produce two decorative fabrics of a complex nature each semester and submit reports covering their specifications, design, analysis, and manufacturing cost.

Mr. Shinn

W. D. 47—Industrial Management—Semester 1 (2 and 0) 2 cr.

Purpose: To give the student an insight into the principles of factory organization and administration. *Principal Topics*: The design and construction of factory buildings; selecting equipment; plant layout; material handling; lighting; time and motion study; wage payment plans; manufacturing costs. (*Industrial Engineering and Management,* Barnes.)

Mr. Shinn

W. D. 47.5—Personnel Management—Semester 2 (2 and 0) 2 cr.

Purpose: To acquaint the student with the personnel problems of the textile mills and the methods employed in the management of labor. *Principal Topics*: Employee development; industrial historical background; selection and placement; compensation; job analysis and specifications; joint relations; personnel records; industrial sanitation and health; safety; industrial codes. (*Applied Personnel Administration*—Walters.)

Mr. Shinn

W. D. 48—Knitting—Semester 2 (0 and 2) 2/3 cr.

Prerequisite: Open to juniors and seniors in the textile school.

Purpose: To familiarize the student with the principles of knitted fabric construction and hosiery production. *Principal Topics*: Knitting mechanisms; construction of knitted fabrics and hosiery; rib knitting; hosiery machinery; fancy knitting; sinker-reverse plating; the float stitch

principle; the welt stitch principle, hosiery analysis; material costs; labor costs; overhead costs; knitting calculations. (*Technology of Knitting,* Shinn.)

Mr. Shinn

W. D. 50—Thesis—Semester 2 (0 and 2) 1 cr.

Purpose: To introduce the student to the experimental method of solving problems. *Principal Topics*: Individual problems requiring original investigation will be assigned in some phase of textile manufacture. The thesis will consist of a report on the results obtained through research or experiment.

Mr. Shinn

ROOMS AND EQUIPMENT OF THE WEAVING AND DESIGNING DEPARTMENT

The class rooms and laboratories of the Weaving and Designing Department are equipped for instruction in the manufacture of a wide variety of woven and knitted products. The weaving laboratories contain thirty-nine looms representing practically all types of plain, gingham, dobby, and Jacquard looms in use in the southern cotton mills with additional equipment for winding, warping, slashing, and card stamping.

The knitting division is equipped with the leading types of latch needle hosiery machinery for the production of ladies' and men's plain and fancy hosiery. Modern lighting and humidifying systems have been installed in all the laboratories and class rooms.

YARN MANUFACTURING

Mr. Eaton

Mr. Lee Mr. Gage* Mr. Dunlap Mr. Rouse

Y. M. 11—The Textile Industry—Semester 1 (1 and 2) 1 2/3 cr.

Purpose: To introduce textile students to the industry through study and discussions on factory organization; the use of cleaning and spinning machines; nomenclature. *Principal Topics*: Brief history of the industry; relation of owners and management; economic importance of textiles. The laboratory is used to demonstrate each machine used in yarn manufacturing. Calculations of machine speeds, drafts and waste explain the action of each machine and its parts and yarn numbering. (*Y. M. Mimeograph Notes.*)

Mr. Eaton Mr. Lee Mr. Dunlap Mr. Rouse

*On leave first semester 1934-1935.

Y. M. 21—Pickers—Semester 1 (2 and 2) 2 2/3 cr.

Purpose: To give the student thorough knowledge of cotton opening, cleaning, and lap forming equipment. *Principal Topics*: Bale breakers, automatic feeders, lappers; cleaning trunks, beaters, evener motions and measuring devices, calculations for drafts, production, waste and speeds. (*Cotton Yarn Manufacture*—Winchester; *Y. M. Mimeograph Notes.*)

Mr. Lee Mr. Gage Mr. Dunlap

Y. M. 22—Cards and Drawing Frames—Semester 2 (2 and 2) 2 2/3 cr.

Purpose: To give the student thorough knowledge of revolving top flat cards and drawing frames as used in cotton manufacturing. *Principal Topics*: Settings, grinding, stripping, card clothing, calculations for card speeds, production, waste and draft. Roll settings, metallic and covered top rolls, all calculations and practice in operating both machines. (*Cotton Yarn Manufacture*—Winchester; *Y. M. Mimeograph Notes.*)

Mr. Eaton

Y. M. 23—Mill Problems—Semester 1 (2 and 0) 2 cr.

Purpose: To give a thorough foundation in arithmetic as applied to textile manufacturing. *Principal Topics*: Deals with problems in draft, twist, waste percentage, production and machine organizations. (*Cotton Mill Mathematics*—Quigley and Smith; *Y. M. Mimeograph Notes.*)

Mr. Dunlap

Y. M. 28—Cotton Grading—Semester 1 and 2 (0 and 2) 2/3 cr.

Purpose: To teach the fundamentals of cotton classing according to U. S. Government Standards for grades and staples. *Principal Topics*: Stapling, classing and valuing all grades of cotton raised in U. S. Methods of ginning, marketing and handling cotton. Contracts and claims. (*Government Bulletins; Cotton Yarn Problems*—Smith; *Y. M. Mimeograph Notes.*)

Mr. Lee Mr. Dunlap

Y. M. 31—Roving Frames—Semester 1 (2 and 2) 2 2/3 cr.

Purpose: To give complete information on the construction and operation of fly frames. *Principal Topics*: Drafting, twisting and winding on slubbers, intermediates and Jack frames. Production, rolls, spindles and flyers, differential motions and cones, twist per inch, sizing roving, all calculations for above topics. (*Cotton Yarn Manufacture*—Winchester; *Y. M. Mimeograph Notes; Cotton Yarn Problems*—Smith.)

Mr. Eaton Mr. Rouse

Y. M. 32—Doubling and Drafting—Semesters 1 and 2 (1 and 2) 1 2/3 cr.

Y. M. 31 and Y. M. 41 should precede Y. M. 32.

Purpose: To study as a manufacturing unit all card room and spinning room equipment. *Principal Topics*: Calculations for draft, production, weights and number of machines required for various counts; labor costs; production of yarn from raw cotton, using all necessary equipment.

Mr. Lee Mr. Dunlap

Y. M. 41—Spinning, Spooling and Twisting—Semester 2 (2 and 3) 3 cr.

Y. M. 31 should precede this course.

Purpose: To give thorough knowledge of cotton yarns and their manufacture on ring spinning frames; winding, spooling, and twisting machinery. *Principal Topics*: Machine construction, functions of all parts, calculations for draft, twist, doubling and constants. Wet and dry twisting, rings and travelers. (*Cotton Yarn Manufacture*—Winchester; *Cotton Yarn Problems*—Smith; *Y. M. Mimeograph Notes.*)

Mr. Lee Mr. Gage Mr. Rouse

Y. M. 42—Combers, Sliver and Ribbon Lappers—Semester 2 (1 and 2) 1 2/3 cr.

Purpose: To study settings and adjustment of the comber and its preparatory machines, and the value and use of its product. *Principal Topics*: Timing and setting comber for various staples and required waste. Production and all other calculations, management and operation of above machines.

Mr. Lee

Y. M. 44—Mill Economics—Semester 2 (2 and 0) 2 cr.

Prerequisite: At least one textile course, preferably W. D. 43.

Purpose: To give seniors the principles of economics as supplied to general management. *Principal Topics*: Cloth and cotton prices and their relation, calculations for quotations and delivery dates, mill construction, fire and accident insurance, wage and labor conditions. Some of these topics are made the subjects of written reports. (*Y. M. Mimeograph Notes.*)

Mr. Eaton

Y. M. 48—Textile Testing—Semester 2 (1 and 2) 1 2/3 cr.

Purpose: To instruct the student in testing fiber, yarns and fabrics. *Principal Topics*: The principal topics include such factors as variety, growing conditions, fiber uniformity and other factors influencing the strength and uniformity of yarns. The importance of humidity and its effect upon the working qualities and strength of yarn will be demonstrated. (*A. S. T. M. Specifications and Y. M. Mimeograph Notes.*)

Mr. Willis

Y. M. 50—Thesis—Semester 1 (0 and 2) 1 cr.

Required of all Textile Engineering Seniors.

Purpose: To summarize all information gained from previous Y. M. courses. *Principal Topics*: Use of all Y. M. calculations, conduct manufacturing tests, analyze test data and prepare written reports.

Mr. Lee Mr. Gage Mr. Rouse

Carding and Spinning Equipment

The carding and spinning division has one breaker and finisher picker; three cards; four drawing frames; one comber; one sliver lapper and one ribbon lapper; seven fly frames; twelve spinning frames, three of which are long draft; two twisters; two winders; and one spooler.

Testing Laboratory: The textile testing laboratory is equipped with American Moistening humidifying and dehumidifying units, automatically controlled. The laboratory is equipped with modern machines for testing fibers, yarns and fabrics.

ZOOLOGY AND ENTOMOLOGY

Mr. Sherman

Mr. Dunavan Mr. Ware

Z. & E. 12—General Zoology—Semester 2 (2 and 4) 3 1/3 cr.

Purpose: For general science and pre-medical students. To give the student a thorough training in the characteristics, life-histories and habitats of the principal animal forms. *Principal Topics*: Physiology of living cells, animal environments, cell division, maturation, reproduction, genetics, observation and study of representatives of the principal animal phyla. (*Textbook of General Zoology*—Curtis & Guthrie—*Laboratory Directions in General Zoology*—Curtis & Guthrie.)

Mr. Ware

Z. & E. 21—General Zoology—Semester 1 (2 and 2) 2 2/3 cr.

Purpose: For students in agriculture. To familiarize the student with the characteristics, life-histories and habits of the common types of

animals. *Principal Topics*: Physiology of cells, animal environments, cell division, reproduction, observations and study of representative animals. Special emphasis on agricultural phases of the subject. (*Textbook of General Zoology*—Curtis & Guthrie—*Laboratory Directions in General Zoology*—Curtis & Guthrie.)

Mr. Ware

Z. & E. 31—Introductory and Applied Entomology—Semester 1 (2 and 2) 2 2/3 cr.

Prerequisite: Z. & E. 12 or 21.

Purpose: To give agricultural students information concerning the structure, life-history and habits of insects in general and to provide instruction in control of the principal injurious species. *Principal Topics*: Insect structure, metamorphosis, habits, characteristics of the principal orders of insects, methods of control of injurious forms. (*Applied Entomology*—Fernald.)

Mr. Sherman Mr. Dunavan

Z. & E. 32—General Entomology—Semester 2 (2 and 4) 3 1/3 cr.

Prerequisite: Z. & E. 22.

Purpose: Designed especially for students who wish to choose Entomology as life-work. The aim is to provide basic training in the general phases of Entomology. *Principal Topics*: Near relatives of insects, history of Entomology, insect metamorphosis, classification, habits and characteristics of the members of the principal families in all orders of insects, technique of collecting and preserving insects. (*Manual for the Study of Insects*—Comstock.)

Mr. Dunavan

Z. & E. 33—Advanced Zoology—Semester 1 (2 and 2) 2 2/3 cr.

Prerequisite: Z. & E. 12 or 21.

Purpose: To give advanced training in zoological principles and characteristics of animal forms as a basis for later graduate study. *Principal Topics*: Histology, embryology, ecology, distribution and economic relationships of vertebrate animals, characteristics of all vertebrate groups.

Mr. Sherman Mr. Ware

Z. & E. 41—Economic Entomology—Semester 1 (2 and 2) 2 2/3 cr.

Prerequisite: Z. & E. 22.

Purpose: To so equip the student that he will be able to recognize injurious species of insects and their damage and be able to intelligently

control them. *Principal Topics*: Effect of cultivation on insect populations, peculiarities of field crops and their insect enemies, identification, life-history and control of insect enemies of corn, wheat, oats, clover, alfalfa, peas, beans, tobacco, cotton, sugar cane, stored grain, cattle, horses, sheep, swine, poultry, and man. (*Injurious Insects*—Herrick.)

MR. DUNAVAN

Z. & E. 42—ECONOMIC ENTOMOLOGY—Semester 2 (2 and 2) 2 2/3 cr.

Prerequisite: Z. & E. 22.

Purpose: To train students in the recognition of fruit and vegetable insects and in methods of control of these pests. *Principal Topics*: Beneficial insects, history of insect control, host resistance, theory of insect control, chemistry and preparation of common insecticides, special requirements of control of fruit and vegetable insects, identification, life-histories and control of insect enemies of apples, pears, peaches, plums, cherries, grape, bush fruits, strawberries, and all vegetable crops. (*Injurious Insects*—Herrick.)

MR. DUNAVAN

Z. & E. 44—BEEKEEPING—Semester 2 (1 and 2) 1 2/3 cr.

Open to Seniors.

Purpose: To provide the student with the knowledge and actual practice of modern beekeeping which will enable him to become a successful beekeeper if he so wishes. *Principal Topics*: Activities of the colony, life-history and metamorphosis of bees, spring, fall and winter management, enemies of bees, swarm control, production of honey, methods of wintering. (*ABC and XYZ of Beekeeping*—Root.)

MR. DUNAVAN

Z. & E. 45—INSECT MORPHOLOGY—Semester 1 (2 and 2) 2 2/3 cr.

Prerequisite: Z. & E. 22 and 32.

Purpose: Designed especially for students specializing in Entomology. The aim is to give the student detailed knowledge of the external and internal morphology of insects. *Principal Topics*: Structure of the insect head, thorax, abdomen and body appendages, structure of muscles, external and internal skeleton, alimentary canal, reproductive, respiratory, and nervous systems, structure and function of glands and sense organs, physiology of respiration and digestion. (*An Introduction to Entomology* —Comstock—Laboratory: *Anatomy of Insects*—Comstock & Kellogg.)

MR. DUNAVAN

Z. & E. 46—SYSTEMATIC ENTOMOLOGY—Semester 2 (1 and 2) 1 2/3 cr.

Prerequisite: Z. & E. 22 and 32.

Purpose: To give students specializing in Entomology training in identification of insects by the use of keys. *Principal Topics*: Theory of nomenclature, philology of scientific names, important taxonomists of the past and present, detailed taxonomic study of selected groups of insects.

Mr. Sherman

Z. & E. 51 and 52—Seminar—Semesters 1 and 2 (1 and 0) 1 cr.

Prerequisite: Z. & E. 22 and 32.

Purpose: To provide training for students specializing in Entomology in presenting short talks on scientific topics. To present miscellaneous information not given in regular courses but of value to professional Entomologists. *Principal Topics*: Study of various technical journals, lives of famous Entomologists, tropisms of animals, insect ecology.

Mr. Dunavan and other staff members.

Z. & E. 59—Introduction to Research—Semester 1 (1 and 2) 1 2/3 cr.

Prerequisite: Z. & E. 22 and 32.

Purpose: To familiarize the student with research methods in Entomology and to enable each student to gather data and write a graduation thesis. *Principal Topics*: Outlining a problem in research, bibliographic methods, graphic presentation of data, reviews of published papers on entomological technique, practical photography.

Mr. Dunavan

PART VI—PUBLIC SERVICE

*THE SOUTH CAROLINA AGRICULTURAL EXPERIMENT STATION**

The Agricultural Experiment Station of South Carolina is a department of Clemson College. The experiment station at present consists of the main station, which is located at Clemson, and four sub-stations; one at Summerville, in the coastal plain region, one at Florence, in the Pee Dee section, one at Pontiac, near Columbia, in the sand hill region; and one in the trucking section near Charleston. The main offices and laboratories of the station are located on the Clemson College campus, while the station experiment farm, consisting of about 200 acres, is east of and adjoining the college campus. The investigations dealing with the fundamental principles of agricultural sciences and with the application of such principles to practical agricultural operations are carried on in the laboratories and on the experiment station farm at Clemson. The experiments looking to the adaptation of such scientific data accumulated here and elsewhere to the conditions peculiar to certain sections of the State are carried on at the substations and at branch laboratories established in certain sections of the State for this purpose.

It is the aim of the experiment station to conduct research work on problems which have a direct practical bearing on the agriculture of the State. With this end in view elaborate experiments relative to the best methods of procedure under various conditions with the principal plants and animals have been undertaken. Economic and social problems are likewise being investigated. As progress is made the results obtained are given out to farmers in the form of bulletins, circulars and personal letters. Since the establishment of the station 299 such bulletins and 52 circulars have been published, covering practically all phases of agriculture.

Aside from the research work and the publication of results obtained from such research the experiment station performs

*The experiment station staff is given on page 19.

various other duties. Among these might be mentioned the entomological and pathological inspection work which aims to protect the farms, orchards and gardens of the State against the introduction of injurious insects and diseases; the biological and soil survey of the State; and the cooperative experimental work carried on with hundreds of farmers in the State. The technically trained experts of the station staff are regarded as authorities in their several specialties and they are constantly giving out information relating to the various lines of agricultural endeavor. The station staff also aids in disseminating agricultural knowledge by cooperating with the Extension Service of the College in holding agricultural meetings and conferences and by meeting with the farm demonstration agents and giving to them technical information which they in turn carry direct to the farmers.

Close cooperation is maintained with the various research bureaus of the United States Department of Agriculture and with the departments of the College. The laboratories are always open to the inspection of the students and other people of the State. The same is true of the experiment station farm. There is always opportunity for a limited number of students to secure work in the various divisions of the station and to assist in the research work carried on by the members of the station staff.

Home economics research is carried on in cooperation with Winthrop College at Rock Hill. This work is designed to secure additional information on the economic, social, and health factors influencing the home and living conditions of rural people.

Close cooperation is maintained between the home economics research department, the teaching and extension workers in this field, and the clubs and societies engaged in the promotion of better rural homes.

A full report of the work and expenditures of the Experiment Station is published annually and this report and all other publications of the station are free and will be sent on request. Requests for these should be addressed to H. W. Barre, Director, Clemson College, S. C.

*THE AGRICULTURAL EXTENSION SERVICE**

The agricultural extension work of the College is carried on by the Extension Service in cooperation with the United States Department of Agriculture. The work is supported by Federal appropriations and in part by State and County appropriations. The main development of extension work has come since the enactment of the Smith-Lever Act in 1914. The purpose of extension work is to instruct farmers of the State in the practical application of the principles of improved agriculture in both production and marketing. A staff of specialists assist the county agents in planning and carrying out demonstrations with farmers over the State.

Publications and News.—Large numbers of publications, including bulletins, circulars, posters, and information cards are distributed annually. The extension news service to the newspapers of the state consists of (1) mimeographed news letters to all papers issued twice weekly or oftener averaging 30 to 40 stories per month; (2) news letters to the daily papers through the Associated Press as occasion demands; (3) longer special or feature stories to individual papers or groups of papers when special material is at hand. Monthly letters or printed circulars on poultry, orchards, gardening, dairying and boys' club work are mailed free to those persons especially interested in these subjects.

County Agents.—Every county in the State, by Act of the Legislature in 1929, has a county farm agent. These agents are agricultural college graduates who have had practical farm experience. They devote their time to instructing farmers through demonstrations, personal conferences, meetings, community organizations, publications, letters, and otherwise.

Home Economics Work.—This work is carried on under the immediate supervision of Winthrop College. It is, however, a part of the extension work under the Smith-Lever Act, and as such is under the general direction of the Extension Service. Every county is provided with a home demonstration agent by legislative enactment.

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*The extension staff is given on page 21.

Negro Demonstration.—Twelve negro local agents are employed to work with the negro farmers of the State in sections where the negro population is great. These agents are employed in cooperation with the State College at Orangeburg, and the president of the State College acts as supervising agent.

Live Stock.—Work in this project is carried on with the idea of promoting the live stock interest of the State along sound permanent lines. Those desiring to purchase purebred live stock can in most cases secure them within the State from breeders who have been assisted by the Extension Service. This was not true some years ago. Live stock agents have also stimulated the growing of pastures and forage crops and have assisted in the feeding and marketing of cattle and the co-operative purchase of materials needed. There is a revival of interest in hogs and sheep and with low cotton prices these lines of live stock work will no doubt make greater demand for assistance on the Extension Service.

Dairying.—The extension dairymen devote their time chiefly to development work such as bull associations, feed campaigns, dairy schools, advice regarding the construction of silos, barns, purchase of dairy cattle and the testing and improvement of herds, and the marketing of products.

Corn and Cotton Work.—Cotton demonstrations among farmers are conducted for the purpose of improving the quality of staple and lowering the costs through larger yields per acre. A similar line of demonstration is in operation to put the growing of corn on a more efficient basis.

Orchards, Gardens and Sweet Potatoes.—Home orchards and gardens, commercial peach and apple orchards and the efficient production of sweet potatoes for market are the principal lines of work developed by the extension horticulturists. The results obtained in the last few years along these lines are far reaching, and point the way for the utilization of some of our acres under present conditions.

Poultry Work.—The wisdom of increasing the size and quality of farm flocks is now being emphasized, together with efficiency in marketing poultry. For a number of years shipments of live poultry in car lots have been increasing. Many hatcheries are in

operation and every phase of poultry production is being enlarged. A modern poultry plant at Clemson was given to the College by a friend interested in promoting agricultural welfare and readjustment. This is one of the best poultry plants in the cotton states and serves as a place to work out poultry problems, as well as a demonstration to farmers and for teaching purposes.

Marketing.—About 50 per cent of the time of extension workers is spent aiding in marketing. Efforts are made to secure convenient and profitable marketing arrangements for the various crops of the State. The organization of co-operative marketing associations is encouraged. Proper grading and loading for shipment are stressed, particularly where farmers are just beginning to produce a new crop. Shipping point inspection has been provided for those who want it in cooperation with the Federal Bureau of Agricultural Economics for the protection of shippers of certain perishable crops. Very little crop surplus is produced for which some outlet has not been found. The chief problem lies in producing and preparing for market preferred quality products.

Entomology.—There are two principal lines of this work: first, insect control work, and second, beekeeping work. One specialist is employed who gives his time to the insect work, instructing farmers as to the life history, habits, etc., of insects and control measures.

A specialist in bee keeping is employed to develop this industry. This State has great possibilities along this line.

Boys' Club Work and Short Course.—Boys' agricultural clubs are organized with the idea of enlisting the intelligent interest of the boys, and through them their parents, in improved methods of agriculture. To the winners of certain contests short courses are provided at the College during the summer months.

Agricultural Economics.—Much farm production takes place blindly without satisfactory knowledge on the part of farmers and farm credit agencies as to the prospect for success in any given enterprise, or for any particular acreage of a crop. There is a very great need for wider dissemination among farm people of economic information that may be used by them as a guide in planning their farm businesses. Realizing these facts a division

of Agricultural Economics has been created in the Extension Service to aid in keeping the farm people of the State better informed on economic matters and to carry to them the results of research work.

Since the beginning of the acreage adjustment work of the Agricultural Adjustment Administration in 1933 under the United States Department of Agriculture, the major work of the Extension Service has consisted in conducting the campaigns to carry out the policies of the AAA in seeking to improve the economic condition of the farmers.

Agricultural Engineering.—One extension specialist is employed to help guide farm development along engineering lines including terracing, drainage, two-horse and power equipment as well as plans for farm building and other structures.

THE ENGINEERING EXPERIMENT STATION

A majority of the Land Grant Colleges of the United States has established engineering experiment stations. These have proved of great value in aiding industrial and engineering developments in the various states.

The engineering experiment station of the Clemson Agricultural College was established by the Board of Trustees in July, 1924.

Its purpose is to aid the present industries in the state, to do research work on the material resources of the state with a view of leading to the establishment of new industries, to study methods of leading and utilizing waste products, etc.

In addition to serving the industries of the state and helping to solve the engineering problems for the agricultural interests, it is hoped along and in cooperation with the stations of other states to add to the store of scientific and engineering knowledge. The staff consists of well-trained men from the various schools and departments of the college. The laboratories of the several departments of engineering, as well as others, are available for the use of stations in its investigations.

The results of all investigations are to be published in the form of bulletins and circulars to be distributed free to all who may be interested. Copies of publications may be had by applying to the Director of Engineering Experiment Station, Clemson College, South Carolina.

*LIVESTOCK SANITARY WORK**

The Clemson College Live Stock Sanitary Office is a department of Clemson College and is under the supervision of the Agricultural Committee of the Board of Trustees. This office is located in the State Office Building, Columbia, S. C., in order that the best interests of the livestock industry may be served, and is in charge of the State Veterinarian, Dr. W. K. Lewis, who is also Director of this Department.

The principal functions of this office are: Tick Eradication, Tuberculosis Eradication and Hog Cholera Control. In addition to these, all reported outbreaks of contagious, infectious and communicable diseases of livestock are investigated, and measures recommended for the control and eradication of the specific condition; and quarantine is maintained against the introduction of diseased livestock into the State.

The Columbia office has recently established a fully equipped laboratory for bacteriological and pathological work, in order that proper and prompt diagnosis of certain diseases may be made. Parasitic research work will be conducted in various sections of the State in connection with the Columbia laboratory.

In addition to the force of veterinarians working out from the Columbia office, Assistant State Veterinarians are located at strategical points in the State so as to be readily available to the farmers in their respective territories.

On July 1, 1934, twenty-seven practicing veterinarians of the State were commissioned as Deputy State Veterinarians, to assist the State Veterinarian in the control and eradication of contagious and infectious diseases of livestock. The Deputy State

*Livestock Sanitary Work staff is given on page 18.

Veterinarians are located principally in the northern and eastern sections of the State, and with the Assistant State Veterinarians located in the middle and southern sections of the State, the Clemson College Live Stock Sanitary Office is in position to render a service to the livestock industry of the State in keeping with its development and maintain the service to the highest degree of efficiency.

The Clemson College Live Stock Sanitary Office also maintains an equipment for handling large stocks of anti-hog cholera serum, virus and veterinary biologics and furnishes these products to the citizens of the State at cost, thereby effecting a saving to them of several thousands of dollars annually.

The live stock sanitary work is required by legislative enactment and is supported by legislative appropriations.

The Bureau of Animal Industry, U. S. Department of Agriculture, cooperates in Tick Eradication, Tuberculosis Eradication, and Hog Cholera Control, and appropriates funds in addition to the State appropriation for these projects.

Fertilizer Inspection and Analysis.—The work of fertilizer inspection and analysis is under the supervision of the Board of Control consisting of a committee of Board of Trustees. The work of inspection is under the immediate supervision of the Secretary of the Board of Control.

There are inspectors to look after this feature of the work in different parts of the State.

The work of analysis is carried on in the Fertilizer Analysis Division of the Chemical Department and is under the supervision and direction of Mr. B. F. Robertson, Chief Chemist.

The work consists of the analysis of commercial fertilizers as provided for by the Fertilizer Law of the State. This Division also undertakes the analysis of waters, ores, minerals, and other naturally occurring materials, except soils (which are analyzed by the Experiment Station), portions of human bodies in cases of suspected poisoning, as provided for by law, and the analysis of home-mixed fertilizers. All the work of this Division is done free of charge.

MISCELLANEOUS PUBLIC SERVICE

Entomological and Pathological Inspection.—This work is carried on under the direction of the State Crop Pest Commission. The State Entomologist and the State Pathologist have charge of this work under the commission.

The work of these officers consists in the control of contagious plant diseases and insect pests. Supervision of all nursery stock sold within the State is a duty of the Crop Pest Commission.

A permit tag issued by the State Crop Pest Commission should be attached to every package of nursery stock, seed or plants offered for sale or shipment for planting purposes.

Textile Testing.—The textile department maintains a yarn testing service for the cotton mills of South Carolina.

Textile Research.—Clemson in cooperation with the Bureau of Agricultural Economics of the United States Department of Agriculture conducts manufacturing tests of grades, staples, and varieties of cotton. Valuable reports based on this work are issued from time to time. Copies of the same may be had by addressing either the College or the Bureau of Agricultural Economics.

Service to Textile and Other Industrial Teachers.—The College in cooperation with the State Department of Education is glad to assist those who teach night schools by supplying a trained man to assist in the work of organizing classes, organizing courses of study, making plans for teaching evening classes, and actually teaching vocational subjects. Requests for information regarding this service should be addressed to Professor L. R. Booker, Itinerant Teacher Trainer, Industrial Education Department, Clemson College, S. C.

Agricultural Itinerant Teacher Training

The members of the staff of Agricultural Education conduct itinerant teacher training with the 160 regular teachers of vocational agriculture and the 170 relief teachers of agriculture. The teachers are organized into twelve groups. The different groups meet at Walterboro, Orangeburg, Columbia, Ridge Springs, Mc-

Bee, Greenville, Rock Hill, Spartanburg, Clemson College, Florence, Marion and Kingstree.

A teacher trainer conducts about eight meetings with each group at regular intervals throughout the year. These meetings are usually held on Saturday. The teaching content presented at these meetings is timely and adapted to the needs of the teachers in the different regions. The members of the different departments in the School of Agriculture cooperate with the teacher trainers in instructing the agricultural teachers in the field.

State Vocational Agricultural Judging Contest

The Clemson Agricultural College in cooperation with the State Department of Education conducts annually a judging contest for students of vocational agriculture. The nature of this contest is educational and many high school boys have an opportunity thereby of improving themselves in selecting better specimens of various agricultural products. The two schools ranking highest in the contest in 1934 were: First, Cameron, L. S. Long, Jr., coach and second, Marion, A. C. Tollison, Coach. S. H. Houck of Cameron was awarded a prize as the highest individual contestant. The Cleveland team won first place in judging dairy cattle. The Wagener team won first place in judging all classes of poultry. The Cameron team won first place in judging crops. The Lodge team won first place in judging horticultural products. The Marion team won first place in judging general livestock, thereby winning a trip to Kansas City to represent the State in the Vocational Students' Judging Contest at the American Royal Livestock Show.

Publication

The Agricultural Education staff publishes a monthly bulletin which is used by students of vocational agriculture in the public schools of the State. The content of this bulletin consists largely of the results of experimental work in agriculture which is organized to assist students in solving their farming problems. This bulletin has been published for eleven years. The teachers of agriculture have made it a practice to have the numbers of each volume

bound for current use. All back numbers have been completely indexed. The bound volumes of Agricultural Education together with the current monthly issues provide the students of vocational agriculture with a record of the results of applicable experimental work in agriculture. At the present time 5000 copies are published monthly. This publication is available to students and teachers of agriculture and others at cost.

THE SUMMER SCHOOL

The 1934 Clemson summer school made available the facilities of the College and cooperating agencies for teachers, high-school graduates, and others in the fields of architectural drawing, agriculture, botany and bacteriology, chemistry, dairy, education, electricity, English, history, industrial arts, mathematics, physics, textiles, typewriting and shorthand, and zoology. Demonstration classes were provided for observation by teachers. Members of the regular faculty and outstanding leaders in agriculture, industry and education were included in the teaching force. Approximately 300 persons were in attendance.

In cooperation with the State Department of Education the summer school provided special opportunities for the training of teachers of agriculture and workers in the trades and industries in a few fields.

The 1935 Clemson Summer School catalog will be issued in the early spring. For information write Dean of the Summer School, Clemson College, S. C.

PART VII.—STUDENT REGISTER

WAR DEPARTMENT TRAINING STAFF

Colonel Thomas S. Moorman——Infantry
Captain James P. Gammon——Infantry
Captain Joseph H. Hinwood——Infantry
Captain George L. Ramsey——Infantry
Captain Albert H. Dumas——Infantry
Captain Waine Archer——Infantry
Staff Sergeant Gilbert E. Naramor——Detached Enlisted Men's List
Sergeant Harry J. Wilkinson——Detached Enlisted Men's List
Sergeant Aubrey J. Kline——Detached Enlisted Men's List

CADET REGIMENTAL ORGANIZATION

Colonel Duke Richardson, (Regimental Commander).
Lieut. Colonel George Chaplin, (Regimental Executive Officer).
Captain A. L. Gilliam, (Regimental Adjutant).
Captain J. E. Land, (Assistant Regimental Adjutant).
Captain H. D. Nottingham, (Intelligence Officer).
Captain F. K. Rhodes, (Plans & Training Officer).
Captain P. M. Anderson, (Supply Officer).
Captain Julian Metz, (Chaplain).
Master Sergeant, A. M. Williams (Regimental Sergeant Major).
Master Sergeant C. E. Farmer, (Regimental Supply Sergeant).
Staff Sergeant F. V. Tribble, (Color Sergeant).
Staff Sergeant G. D. Way, (Color Sergeant).

HEADQUARTERS COMPANY

Captain——L. A. Gause
First Lieutenant (Executive Officer)——W. L. Britt
First Lieutenant——H. H. Acker
First Lieutenant——M. T. McClanahan
First Lieutenant——J. T. Rivers
Second Lieutenant——J. H. Cochran
First Sergeant——C. L. Ruffin
Supply Sergeant——O. L. Gurley
Sergeant——J. S. Bass
Sergeant——H. B. Duke
Sergeant——G. B. Eleazer
Sergeant——M. M. Stokely
Corporal——O. H. Folk
Corporal——T. E. Ramsey
Corporal——C. A. Willis

BAND

Captain——H. A. Webb
First Lieutenant (Executive Officer)——H. P. Bridges
First Lieutenant——K. W. Ackis
First Lieutenant——S. W. Page
Warrant Officer——C. C. Frye
First Sergeant——W. C. McGregor
Supply Sergeant——S. C. Dean
Sergeant——J. L. Farmer
Sergeant——W. A. Rhinehardt

Sergeant----------T. F. Snipes
Corporal----------E. C. Heikkila
Corporal----------T. L. McNeely
Corporal----------R. H. Martin
Corporal----------C. L. Melton
Corporal----------G. F. Rogers
Corporal----------R. B. Wearn

DRUM AND BUGLE CORPS

Captain----------O. G. Rawls
First Lieutenant (Executive Officer)----------J. D. Sanders
First Lieutenant----------S. D. Smart
First Sergeant----------R. H. Goodson
Supply Sergeant----------J. C. Boesch
Corporal----------A. G. Courie
Corporal----------J. L. Eskridge
Corporal----------H. L. Law
Corporal----------R. K. O'Cain
Corporal----------P. H. Starr

REGIMENTAL ORGANIZATION

FIRST BATTALION

Lieutenant Colonel, (Bn. Commander)----A. C. Mustard
Major, (Bn. Executive Officer)--------C. E. Cummings
Adjutant----------Captain C. P. Gordon
Sergeant Major----------Staff Sergeant R. E. Graham

COMPANY "A" COMPANY "B" COMPANY "C" COMPANY "D"

Captains

Spann, S. R.	Ferguson, J. A.	Moore, D. C.	Lipscomb, J. L.

First Lieutenants

Spencer, F. A.(*)	Bowie, P. E.(*)	Webb, W. W.(*)	Byrd, H. M.(*)
Marshall, C. F.	Anderson, W. D.	Bolding, E. L.	Dillard, W. W.
New, H. E.	McMahan, C. A.	Rogers, R. T.	Greene, G. B.

Second Lieutenants

Abernathy, W. L.	Brown, J. D.	Cope, J. M.	Hawkins, B. S.

First Sergeants

McCarter, E. H.	Thomas, W. M.	Brown, P. J.	Commander, R. C.

Company Supply Sergeants

Roach, T. B.	Williams, B. H.	Simons, R. L.	Mikell, J. J.

Sergeants

Acker, L. M.	Austin, F. J.	Ballard, J. C.	Cook, F. E.
Branch, J. S.	Cassidy, J. F.	Chapman, W. H.	Davis, J. I.
Forshaw, T.	Hardin, S. F.	Gantt, W. A.	Dowling, H. E.
Harby, H. D.	Lee, W. A.	Glymph, E. M.	Farley, W. D.
Smith, B. E.	Winn, J. W.	Jenkins, F. L.	Johnson, O. L.
		Rambo, E. K.	McMaster, E. A.
			Rankin, G. H.
			Shirley, J. H.

(*) Indicates Company Executive Officer.

Corporals

Ballard, W. H.	Epps, W. M.	Cannon, J. H.	Cobb, J. E.
Bowen, L. L.	Finley, F. F.	Dacus, E. E.	Craig, S. J.
Cain, B. D.	Giles, E. S.	Forbes, W. B.	Girardeau, J. H.
Dunlap, J. F.	Lewis, J. W.	Green, J. H.	LeMaster, H. W.
English, W. R.	Mann, J. T.	Helms, C. L.	McNamara, T. F.
Farr, D. L.	Reames, J. T.	LeRoy, R. E.	Massingale, H. E.
Floyd, E. H.	Ward, E. P.	Merritt, H. A.	Meadors, J. H.
Leitner, H. D.	Warren, G. C.	Prestwood, J. G.	Muldrow, J. E.
McCleskey, S. L.	Welch, E. S.	Ryan, E. L.	Snyder, A.
McSwain, J. W.	Wever, L. R.	Stanton, L. M.	Windell, J. R.
Martin, T. I.	Sander, H. F.	Swearingen, C. R.	
Nichols, G. M.		White, C. G.	

SECOND BATTALION

Lieutenant Colonel, (Bn. Commander)----P. L. Tobey
Major, (Bn. Executive Officer)--------J. H. Woodward
Adjutant----------Captain W. L. Triplett
Sergeant Major----------Staff Sergeant W. H. Wallace

COMPANY "E" COMPANY "F" COMPANY "G" COMPANY "H"

Captains

Fellers, H. S.	Stevens, E. A.	Kirkegarde, H. B.	Harris, J. M.

First Lieutenants

Hollis, C. H.(*)	Carpenter, ND(*)	Linder, V. F.(*)	Hunt, R. M.(*)
Kolb, T. A.	Cole, R. A.	Gandy, E. D.	Thode, J. R.
Burton, J. C.	Wade, F. C.	Leland, W. B.	Tindal, N. E.

Second Lieutenants

Shumpert, W. M.	Strange, T. S.	Suggs, L. D.	McLaurin, C. H.

First Sergeants

Chapman, M. C.	Scott, R. F.	Orr, S. M.	Misdom, H. E.

Company Supply Sergeants

Littlejohn, S. M.	Horton, B. T.	Todd, A. W.	Rice, C. W.

Sergeants

Inabinet, C. J.	Bryan, J. P.	Copeland, W. E.	Cousar, H. N.
King, S. T.	Geer, J. R.	Henry, D. H.	Henley, C. M.
Kinghorn, A. M.	George, A. M.	Murph, M. L.	Huff, P. D.
Shelley, D. A.	Harris, J. N.	Nelms, W. L.	Johnstone, T. K.
Sweeting, R. C.	Langston, P. Q.	Sturgis, D. C.	Nisbet, W. O.

Corporals

Coleman, W. J.	Cloaninger, W. B.	Ashmore, H. S.	Cutts, W. H.
Federline, J. R.	Cochran, H. E.	Burgess, L. H.	Hankinson, W. O.
Garrett, J. S.	Davis, J.	Campbell, R. S.	Hickey, W. E.
Gordon, W. M.	Edwards, J. H.	Holt, E. R.	Hutching, J. F.
Hilton, R. E.	Gray, C. A.	Jackson, N. M.	Jenkins, R. M.
Howard, E. H.	Ponder, J. E.	Lewis, W. K.	Jones, J. C.
Moorhead, J. J.	Simpson, W. M.	McClure, W. T.	Jones, J. W.
Rickards, T. M.	Stone, D. B.	McCorkle, N. C.	LaGrone, A. W.
Roberts, H. E.	Tupper, G. L.		Strohecker, H. O.
Speer, W. A.			Travers, H. C.
Stallworth, T. A.			

(*) Indicates Company Executive Officer.

THIRD BATTALION

Lieutenant Colonel, (Bn. Commander)----J. L. Cochran
Major, (Bn. Executive Officer)----------A. W. Allison
Adjutant----------Captain A. T. McSwain
Sergeant Major------Staff Sergeant W. B. Yarborough

COMPANY "I" COMPANY "K" COMPANY "L" COMPANY "M"

Captains

Smith, W. G.	Crain, V. M.	Platt. W. M.	Christopher, T. D.

First Lieutenants

Thackston, W.M.*	Plowden, H. A.*	Madden, JHM(*)	Cooler, S. C.(*)
Hood, H. R.	Haigler, H. C.	Kirk, H. L.	Stewart, J. H.
Pope, D. T.	Price, B. G.	McMillin, J. P.	

Second Lieutenants

Salley, C. M.	Black, H. A.	McConnell, W. B.	Register, J. R.

First Sergeants

Green, H. A.	Page, D. D.	Stevenson, C. O.	Cureton, R. W.

Company Supply Sergeants

Taylor, S. P.	Gambill, L. A.	Williams, L. A.	O'Kelly, G. R.

Sergeants

Cheatham, B. F.	Compton, J. B.	Fletcher, J. F.	Dawson, J. H.
Cheves, C. L.	Duval, L. S.	Hair, H. B.	Richardson, H. B.
Evans, W. D.	Gray, W. R.	Hinson, C. R.	Truesdale, L. F.
Otey, P. K.	Kinard, J. D.	Lyons, R. A.	Wilburn, J. M.
Perez, S. V.	Martin, R. V.	Woodward, R. S.	
Sanders, R. W.	Simpson, J. L.		

Corporals

Bacot, H. P.	Ballentine, C. E.	Beam, M. J.	Alexander, E. M.
Bertram, W. H.	Berry, J. N.	Brooks, J. C.	Buckner, P. M.
Bryan, G. E.	Hutcheson, C. E.	Browning, C. O.	Conner, C. G.
Burkett, W. O.	Jenkins, R. W.	Carter, R. A.	Dixon, T. C.
Carter, J. P.	Jeter, J. M.	Chavous, F.	Gorman, D.
Cox, J. L.	Maness, R. C.	Dunlop, W. K.	Lemon, R.
Harris, J. B.	Patterson, F. D.	Hunter, J. S.	Shuler, E. L.
Lanham, B. T.	Shuford, M. I.	Lawton, F. A.	
Lewis, H. D.	Smyth, M. H.	Shell, V. M.	
Little, C. B.		Watkins, D. W.	
Segars, H. K.			
Taylor, G. M.			

(*) Indicates Company Executive Officer.

GRADUATES OF 1934

BACHELOR OF SCIENCE DEGREE—SCHOOL OF AGRICULTURE

Agriculture—Agronomy Major

William Edwin Dargan.....Darlington
Leonard Austin Dobson.....Greer
George Harmon.....Lexington
Jack Robert Hutcheson..Buchanan, Ga.
George Wayne LeMaster.....Gaffney
Crayton McCown.....Darlington
Jacob Dudley Rouse.....Luray

Agriculture—Animal Husbandry Major

Johnson Craig.....Central
Hugh Graham Dargan.....Darlington
William Glenn Yarborough.....Chester

Agriculture—Chemistry Major

George Hinton Basha.....Charleston
Joseph Reid Ellis.....Richburg
Francis Lavall Green.....Bishopville
William Jefferson Hanna.....Blacksburg
Fields Luther Parks, Jr.....Meggett
William M. Sanders.....Summerville
Cyril Ovierre Shuler.....Aiken
Nolan Percy Shuler, Jr.....Eutawville
Kelly Eugene Traynham.....Ware Shoals
Francis Carlton Truesdale.....Kershaw
Henry Bolling Vaughan.....Charleston

Agriculture—Dairy Major

George Mish Barnett, Jr.....Westminster
Ralph Whitten Blakely.....Piedmont
Carroll Cleveland Brannon.....Inman
David Harley Caughman.....Lexington
William Curtis DeWitt.....Darlington
Farnum Moore Gray.....Brunson
William Earl Lupo.....Dillon
William Gordon Lynn.....Taylors
Evander Roderick McIver, Jr..Florence
Walter Preston Rainey.....Woodruff
Clarence Washington Senn.....Newberry
Robert Lindley Steer.....Clinton

Agriculture—Economics Major

Charles Burnis Alexander.....Six Mile
Frank Young Duncan.....Sharon
Kermit Lee Faile.....Kershaw
James Kelly Hope, Jr.....Lewis Turnout
Brice McDowell Latham.....York
Paul Silas Williamon.....Six Mile
James Hugh Witherspoon.....Mayesville

Agriculture—Entomology Major

Fred Timms Langford.....Blythewood
Orville Martell White.....West Union

Agriculture—Horticulture Major

John Julius Avinger.....Wando
Theodore Cuyler Bigger.....York
Carlyle Newton Clayton.....Liberty
Paul Chaplin Grimball.....Johns Island
Alexander Chisholm McRae, Jr.....Clio
William Howard Mann.....Atlee, Va.
Fairey Lee Prickett.....St. Matthews
Samuel Guilds Seabrook.....Johns Island
Herbert Marvin Smith.....Johnston
John Donnom Witherspoon, Jr..Laurens

Agricultural Engineering

Louis Mellichamp Andrews...Charleston
David Holman Atkinson.....Orangeburg
Purvis William Bane.....Mullins
Wyburn Cameron Dozier.....Marion
Archie Andrew Langley.....Plum Branch
Wallace Stewart.....Simpsonville

Animal Husbandry and Agricultural Education

Carey Edwin Lacey.....Ravenel

Agricultural Chemistry and Arts and Science

William Brown Barber.....Chester

BACHELOR OF SCIENCE DEGREE—SCHOOL OF CHEMISTRY

Chemistry

James Earle Copeland.....Pamplico
Leo Homer Crosson.....Leesville
Russell Brayton Eaton..Clemson College
William Pemberton Greene...Darlington
Calhoun Newton Hinton.....Pickens
Henry Alberta Hunt.....Walhalla
Joseph Everett Hunter, Jr.
.....Clemson College
Samuel Bradley Knight.....Bishopville
Philip Haxal Latimer, Jr. Brunswick, Ga.
Walter Dickson Moss, Jr.....Walhalla
Cecil Browning Ray.....Greenville
George Wilson Robinson..Asheville, N. C.
Fred Speer Sadler.....Greenville
Frank Bonnell Schrimer, Jr...Charleston
John Raymond Sharpe.....Orangeburg
Arthur Leland Slade, Jr.....Edgefield
George Williams Toncray
.....Johnson City, Tenn.
Robert Eugene Wells.....Gray Court

BACHELOR OF SCIENCE DEGREE—SCHOOL OF ENGINEERING

Architecture

William Worth Barron....Elberton, Ga.
Thomas Jefferson Bissett....Tampa, Fla.
Alex Archibald Dickson.....Columbia
William Ernest Freeman, Jr...Greenville
Robert French.....Augusta, Ga.
Leonard Christy Gaines.....Anderson
Oscar Roland Huskey, Jr....Spartanburg
William Gordon Lyles.....Newberry
Samuel LeNoir Moise.....Sumter
Albert Sidney Thomas.....Charleston

Civil Engineering

Malcolm Senn Abrams.....Newberry
Richard Hobcraft Allan, Jr...Charleston
Joseph Brunson Barnwell.....Florence
Clarence Lafayette Beaudrot...Greenwood
Harry Lee Frazier.....Orangeburg
William Roy Fudge.....Abbeville
John Rush Herndon, Jr....Toccoa, Ga.
Ernest Howard King.....Mullins
John Thomas McKinney, Jr.....Easley
William Olin Mauldin.....Liberty
Robert Henry Middleton, Jr...Clarks Hill
Henry Harrison Odell.....Chicago, Ill.
Alexander McQueen Quattlebaum
.....Johnston

Electrical Engineering

Alfred Jack Blanton.....Gaffney
Melvin St. John Blitch, Jr....Charleston
William Clyde Burns.....Orangeburg
William James Burton.....Seneca
Guy Marshall Carter.....Lodge
James Nixon Dobey.....Johnston
Frank Wilton Edwards....Fountain Inn
Clarence Mitchell Evans.....Pamplico
Joseph Spottswood Geer.....Greenville
Emory Thompson Gladden....Fort Lawn
John Hagan Graves.....Abbeville
Roy Johnson Greene.....Orangeburg
Joseph Edmond Guill,
.....Hendersonville, N. C.
Lucius Herman Harvin, Jr.....Manning
John Claudius Heinemann...Georgetown
Charles Murray Henley....Summerville
Haskel Henry Heron.....Jenkinsville
Paul Avery Lowry, Jr.....Columbia
Lyle Nelson McKain.....Florence
John William Miller, Jr.....York
Julius Henry Muller.....Charleston
John Milton Munn.....Effingham
Robert Alvin Owen.....Orangeburg
Steele Roy Patterson.....Seneca
David Emory Penney, Jr.....Abbeville
Oscar Hawley Rawlinson.....Jordan
Robert Fuessel Riley.....Garnett
William Leon Schachte....Summerville
Ronald Bomar Shores.....Spartanburg
Ambrose Hooper Skardon....Walterboro
Jack Thomas Steppe, Jr.....Columbia
Woodrow Hampton Taylor.....Leesville
John Herbert Thompson.....Leesville
Edward Mims Walker, Jr.....Johnston
James Blease Westmoreland Williamston
William Joseph White, Jr.....Charleston
Henry Shanklin Wilson.....Pendleton
Simon Wolf.....Johnston

Mechanical Engineering

Charles Simonton Alston.....Union
John Ulysse Bell, Jr.....Lancaster
Theodore Scott DuBose.....Oswego
Stephen Edward Ellerbe.....Ridgeville
Edward Davis Gilmer.....Greenville
Tracy Howard Jackson..Clemson College
William Lawrence Leverette...Columbia
James Riley McNab.....Barnwell
Henry Hutchinson Nathan....Charleston
Hugh Barton Rainey.....Campobello
Elbert Watson Stone, Jr.....Union
Fred Myers Thompson.....Greenville
Percy Wilmot Townsend.....Walterboro
Hugh McFaddin Wheeler.....New Zion

BACHELOR OF SCIENCE DEGREE—SCHOOL OF GENERAL SCIENCE

Arts and Science and General Science

Willie Ray Baldwin—Orangeburg
Herman Boroughs Boggs—Calhoun
Walter Carroll Chipley—Greenwood
Charles Philip Cowherd—Branchville
Lawrence Major Dobson—Greer
Frederic Eugene Green—Anderson
Wickliffe Cook Hutchison—West Union
Jack Lawrence—Greenwood
Thomas Norwood Lide—Anderson
Cleveland Arthur Lytle—Fort Mill
Jesse Webster Miller—Holly Hill
David Smithson Moon—Westminster
Edwin Lamar Nichols—Rock Hill
Ralph Winfred Roberts—Marion
Joseph Edgar Sherman—Clemson College
James Knox Simpson—Jacksonville, Fla.
Richard Spain Vaughan—Darlington
Murray Wood—Greer

BACHELOR OF SCIENCE DEGREE—SCHOOL OF TEXTILES

Textile Chemistry

Luther McGran Adams—Rock Hill
Raymond Anthony All—Allendale
James Garner Bagnal—Sumter
Donald Alfred Barnes—Camden
Warren Chester Cobb—Cateechee
Frank Robertson Iler—Greenville
Robert Francis Jenkins—Sumter
Joseph Edward Jones—Rock Hill
Curtis Clark McMillin, Jr.—Inman
Charles Daniel Wyatt—Easley

Textile Engineering

William Zorn Bryan, Jr.—Allendale
Frank Harrison Cunningham—Greenville
Jack Bernard Day—Cowpens
Philip Warren Goss—Elberton, Ga.
Morris Knigoff—Greenville
David Kohn, Jr.—Greenville
Otis Benjamin Lynes, Jr.—Fairfax
William Davis Metts, Jr.—Greenville
Benjamin Kennedy Sharp—Pendleton

Weaving and Designing

Mordie Isadore Garber—Williston
Joseph Thomas Rouse—Luray
Sheldon Morris Newsom—Jacksonville, Fla.

BACHELOR OF SCIENCE DEGREE— SCHOOL OF VOCATIONAL EDUCATION

Vocational Agricultural Education

William Rudolph Carter, Jr.—Ridgeland
Cecil Erwin Chapman—Hartsville
Frank Preston Copeland, Jr.—Lamar
Joe James Cox—Moore
Moses Alexander Foster—Roebuck
Alvin Charles Fowler—Taylors
John Baskin Gibert—Rodman
Daniel Pressley Griffis—Edgefield
Charles Palmer Hamilton—Conway
William Mason Howle—Darlington
Asbury Wilson Koon—Peak
Woodrow Wilson Lindler—Saluda
John Lewis Mack—Lone Star
Maxcy Pearle Nolan—Blenheim
Karl Edward Nuessner—Greenville
Wade Bowen Perry—Easley
Samuel Thomas Royals—Hammond
James Lemuel Scarborough—Elliott
Richard Parker Smoak—Fort Motte
Lloyd J. P. Stone—Inman

Vocational Engineering Industrial Education

John Bennett, Jr.—Orangeburg
Carroll James Collins—Inman
Carol Winfield Coons—Rock Hill
Stephen Kelly Deason—Barnwell
Charles Milton Densler—Charleston
James Boyce Elliott, Jr.—Fort Mill
James Buchanan Hunt—Prosperity
Henry Lee McDonald—Anderson
Norman Curtis Parks—Bennettsville
Marvin Bishop Self—Westminster
Everett Binkly Willis, Jr.—Iva

PROFESSIONAL DEGREE OF ELECTRICAL ENGINEER

Benson McHardy Jones—Pittsburgh, Pa.

THIRTY-EIGHTH COMMENCEMENT, JUNE 1934

Baccalaureate Sermon

DR. R. C. GRANBERRY, *President,* Limestone College, Gaffney, S. C.

Address to Graduating Class

DR. OCTAVUS ROY COHEN, Birmingham, Alabama

DEGREES CONFERRED 1934—NOT AWARDED AT JUNE COMMENCEMENT

Agriculture—Agronomy

Nash Newton Gray----------Owings

Agriculture—Animal Husbandry

Jasper Reuben Parker----------Anderson

Agriculture—Economics

Kermit Madison Watson----------Central

Agricultural Engineering

Harry Thomas Harllee----------Florence

Architecture

Henry Tygert Albright----------Palmyra, N. J.
John Monroe Lambert----------Florence

Civil Engineering

Thomas Joseph Zuvich----------Brooklyn, N. Y.

General Science

Charles Mills Pace----------Spartanburg

Mechanical Engineering

Mark Robert van de Erve----------Charleston

Textile Engineering

James Gendron Gibbs----------Charleston
David Edgar Simons, Jr.----------Johnston

Vocational Agricultural Education

Garrett Judson Mobley----------Kershaw

Vocational Engineering Industrial Education

Joe Lafayette Bussey----------Spartanburg
Mack Earle Kelly----------Central

LIST OF STUDENTS, FIRST SEMESTER, 1934-1935

The names are arranged in alphabetical order and following the names are symbols indicating classes and courses. The numerals preceding the course symbols refer to classes, viz.: 1, Freshman; 2, Sophomore; 3, Junior; 4, Senior. (Classified as of first semester. See page 51). A-Agriculture (abbreviation indicates major course for seniors: Agr-Agronomy; AH-Animal Husbandry; Ag C-Agricultural Chemistry; D-Dairy; Ag Ec-Agricultural Economics; Ag Engr-Agricultural Engineering; F-Forestry; Hort-Horticulture; Ent-Entomology. GS-General Science. Ar-Architecture. C-Chemistry. E-Engineering (all engineering freshmen, electrical and mechanical sophomore and junior classes). CE-Civil Engineering; Ch Engr-Chemical Engineering; EE-Electrical Engineering; ME-Mechanical Engineering. T-Textile; TC-Textile Chemistry; WD-Weaving and Designing. Voc Ag Ed-Vocational Agricultural Education; I Ed-Industrial Education; TIE-Textile Industrial Education. S-Special (not candidate for degree). New students admitted in September, 1934, are indicated by a dagger(†).

Name and Course	Residence
Abercrombie, P. R. (1 T)†	Gray Court
Abernathy, W. L. (4 Ag Ec)	Fort Lawn
Abrams, J. H. (3 T)	Whitmire
Acker, H. H. (4 GS)	Anderson
Acker, L. M. (3 T)	Anderson
Ackis, K. W. (4 C)	Jacksonville, Fla.
Adams, H. D. (1 T)†	Clio
Adams, J. D. (1 A)†	Westminster
Adams, J. W. (1 E)†	Bloomingdale, Ga.
Adams, R. D. (2 GS)	Seneca
Addison, J. C. (1 A)†	Brunson
Aichele, F. J. (1 A)†	Navy Yard
Alexander, E. M. (2 A)	Chester
Alexander, J. B. (1 A)†	Central
Alexander, S. R. (1 V Ag Ed)†	Central
All, F. E. (1 T)†	Allendale
All, J. B. (3 T)	Allendale
All, J. H. C. (3 T)	Allendale
Allen, W. D. (3 Ag Engr)	Chester
Allison, A. W. (4 ME)	Greenville
Allison, W. E. (4 D)	Columbia
Allison, W. M. (1 T)	Greer
Altman, J. E. (4 CE)	Yemassee
Ambrose. J. R. (1 E)†	Plantersville
Ambrose, L. R. (1 E)†	Plantersville
Anderson, J. W. (1 T)†	Greenwood
Anderson, P. M. (4 Ag Ec)	Ninety Six
Anderson, R. C. (3 C)	Chicago, Ill.
Anderson, W. D. (4 AH)	Laurens
Andrews, W. H. (1 T)†	Chester
Anthony, A. B. (1 E)†	Pickens
Antley, W. S. (4 EE)	Sumter
Ariail, H. H. (1 GS)†	Parr
Arnold, F. T. (1 GS)†	Ridgeland
Arnold, P. R. (1 E)†	Calhoun
Arnold, R. P. (1 T)†	Woodruff
Asbill, E. L. (2 GS)	Leesville
Ashley, R. T. (1 T)	Belton
Ashmore, H. S. (2 GS)	Greenville
Austin, F. J. (3 C)	Newberry
Avinger, A. N. (2 Ar)	Orangeburg
Babb, T. H. (3 TC)	Gray Court
Bacot, H. P. (2 GS)	Lamar
Bagnal, F. W. (1 T)†	Sumter
Bailey, W. R. (3 ME)	Edisto Island
Ball, A. K. (4 T)	Eastover
Ballard, J. C. (3 T)	Clover
Ballard, W. H. (2 T)	Clover
Ballenger, F. G. (2 E)	Greenville
Ballentine, C. E. (2 GS)	Anderson
Ballentine, E. W. (2 A)	Ballentine
Barber, C. G. (1 T)†	Woodruff
Barksdale, J. M. (2 T)	Greenville
Barnes, J. (1 GS)†	Brunson
Barnes, J. K. (2 A)	Brunson
Barnes, W. F. (3 WD)	Florence
Barney, J. N. (4 EE & ME)	Fredericksburg, Va.
Barr, R. R. (1 E)†	Gilbert
Barron, F. E. (3 T)	Columbia
Bartell, D. (1 C)†	Hemingway
Baskin, C. A. (2 T)	Greenville
Baskin, E. D. (2 A)	Bishopville
Bass, J. S. (3 E)	Hartsville
Bates, C. D. (3 E)	Marietta
Bauknight, L. M. (4 Ag Ec)	Easley
Baxter, R. A. (2 T)	Charleston
Beam, M. J. (2 GS)	Gaffney
Beard, S. O. (4 T)	Langley
Beckham, J. B. (1 E)†	Heath Springs
Bell, F. L. (1 GS)†	Lancaster
Bell, W. H. (1 E)†	Shelbyville, Ky.
Bennett, J. M. (3 C)	Salters Depot
Berry, J. N. (2 GS)	Union
Bertram, W. H. (2 CE)	New York, N. Y.
Bessinger, F. B. (1 Ch Engr)†	Olar
Bethea, A. V. (1 GS)†	Dillon

Name and Course	Residence
Bethea, A. W. (1 A)†	Dillon
Bethea, P. W. (1 T)†	Greenville
Betsill, H. L. (1 E)†	Union
Betsill, W. F. (1 E)†	Enoree
Betsill, W. L. (4 V Ag Ed)	Lanford
Bigger, T. C. (S)	York
Biggers, H. B. (3 D)	Kings Creek
Bishop, H. M. (1 E)†	Harleyville
Black, H. A. (4 EE)	Ruffin
Black, M. P. (2 A)	Ward
Boatwright, L. T. (1 E)†	Ridge Spring
Bobo, F. E. (1 E)†	Gray Court
Boesch, J. Christian (1 E)†	Charlotte, N. C.
Boesch, J. Cordes (3 ME)	Barnesville, Ga.
Bolding, E. L. (4 EE)	Pickens
Bolt, J. W. (1 T)†	Laurens
Bolt, R. R. (2 C)†	Simpsonville
Bone, M. B. (1 E)†	Lowndesville
Booth, W. C. (1 GS)†	Cocoa, Fla.
Boozer, G. W. (1 GS)†	Leesville
Boozer, H. W. (1 T)†	Columbia
Boselli, T. J. (1 E)†	New York, N. Y.
Boulware, L. M. (1 T)†	Newberry
Boulware, P. P. (1 E)†	Newberry
Bowen, L. L. (2 T)	Easley
Bowers, S. B. (1 E)†	Columbia
Bowie, P. E. (4 WD)	Greenville
Boyd, A. P. (1 A)†	Abbeville
Bracknell, J. W. (1 A)†	Plum Branch
Bradford, A. W. (1 I Ed)†	Sumter
Branch, J. S. (3 E)	Saluda
Branche, N. C. (1 T)†	Richburg
Brannon, J. T. (1 A)	Cassatt
Breazeale, K. S. (1 E)†	Pendleton
Breazeale, W. C. (2 A)†	Clemson College
Brewster, J. S. (1 E)†	Cedartown, Ga.
Bridge, A. W. (3 AH)	Walterboro
Bridge, M. P. (4 V Ag Ed)	Clemson College
Bridges, C. K. (1 V Ag Ed)†	Heath Springs
Bridges, H. P. (4 WD)	Clemson College
Brigham, E. A. (2 T)	Greenville
Brigman, C. C. (1 T)†	Lancaster
Britt, W. L. (4 Hort)	McCormick
Brooks, J. B. (2 A)	Smoaks
Brooks, J. C. (2 TC)	Gray Court
Brown, J. D. (4 Agr)	Johnsonville
Brown, P. J. (3 I Ed)	Liberty
Brown, T. I. (4 GS)	Clemson College
Brown, W. D. (3 A)	Spartanburg
Brown, W. F. (1 E)	Walhalla
Browning, C. O. (2 T)	Greenwood
Bruce, R. C. (2 C)	Greenville
Brunk, M. E. (1 A)†	Sebring, Fla.
Bryan, G. E. (2 Ag Engr)	Allendale
Bryan, H. L. (4 I Ed)	Hartsville
Bryan, J. P. (2 Ag Engr)	Charleston
Bryan, O. R. (1 GS)	Orlando, Fla.
Bryan, W. C. (1 Ag Engr)†	Fairfax
Bryant, W. L. (2 A)	Mullins
Bryce, C. S. (4 EE)	Florence
Bryce, W. (2 T)	Florence
Bryson, W. M. (4 ME)	Laurens
Buckhiester, W. M. (1 E)†	Taylors
Buckner, P. M. (2 E)	Walterboro
Buford, H. M. (2 TC)	Clinton
Bull, C. B. (2 T)†	Cameron
Burgess, L. H. (2 A)	Belton
Burkett, W. O. (2 A)	Hopkins
Burley, S. T. (2 T)	Monticello
Burton, A. H. (1 GS)†	Charleston
Burton, J. C. (4 Ag C)	Honea Path
Burton, R. H. (1 T)†	Anderson
Buscher, L. E. (2 CE)	Charleston
Butler, A. E. (1 GS)†	Navy Yard
Byars, C. P. (1 A)†	Windsor
Byrd, H. D. (1 E)†	Clinton
Byrd, H. M. (4 GS)	Hartsville
Byrd, J. G. (1 A)	Ridge Spring
Byrd, R. S. (1 Ar)†	Andrews
Cain, B. D. (2 T)	Greenville
Cain, W. O. (1 C)†	Sumter
Caldwell, J. M. (1 E)†	Blackstock
Calhoun, C. E. (3 A)	Clio
Calhoun, C. N. (2 T)	Greenwood
Calhoun, L. M. (3 E)	Barnwell
Camp, B. H. (3 T)†	Chesnee
Camp, C. H. (1 E)†	Greenwood
Campbell, F. S. (1 T)†	Chester
Campbell, R. S. (2 C)	Cowpens
Campbell, S. E. (1 GS)	Fairhaven, Mass.
Campbell, T. E. (4 CE)	Greenville
Cannon, H. L. (2 T)	Roanoke Rapids, N. C.
Cannon, J. H. (2 E)	Rock Hill
Carnes, E. E. (1 A)†	Hartsville
Carey, J. C. (4 Hort)	Clemson College
Carpenter, N. D. (4 C)	Elberton, Ga.
Carson, J. W. (2 C)	Anderson
Carter, J. P. (2 TC)	Greer
Carter, L. J. (3 A)	Loris
Carter, L. O. (1 E)†	Varnville
Carter, R. A. (2 GS)	Miley
Casey, J. O. (3 T)	Anderson
Cassidy, J. F. (3 A)	Winnsboro
Caston, H. R. (4 V Ag Ed)	Heath Springs
Cathcart, J. K. (3 GS)	Winnsboro
Causey, E. M. (3 I Ed)	Furman
Chapin, D. N. (3 Ar)	St. Louis, Mo.
Champion, E. C. (1 C)†	Greer
Chaplin, G. (4 TC)	Greenville
Chapman, J. K. (1 E)†	Greenwood
Chapman, M. C. (3 A)	Pendleton
Chapman, W. H. (3 A)	Liberty
Chappell, J. E. (1 E)†	Parr

Name and Course	Residence
Chastain, D. R. (1 A)†	Pickens
Chavous, F. (2 T)	Allendale
Cheatham, B. F. (3 EE)	Abbeville
Cheatham, W. L. (1 C)	Abbeville
Cheves, C. L. (3 CE)	Clemson College
Cheves, W. R. (1 E)†	Belton
Childress, R. B. (3 Ar)	Laurens
Chitty, F. C. (2 E)	Chester
Christopher, . T. D. (4 Agr)	Landrum
Clamp, E. W. (3 GS)	Salley
Clark, J. W. (4 C)	Greenville
Clark, S. R. (2 E)	Winnsboro
Clarke, R. T. (4 TC)	Anderson
Clary, F. D. (1 A)†	Gaffney
Clary, R. C. (1 A)†	Lockhart
Clawson, W. T. (1 E)†	Rock Hill
Clayton, D. B. (1 Ar)†	Shelton
Clayton, C. N. (S)	Liberty
Clemmons, J. R. (1 T)†	Marion
Clinkscales, C. C. (2 T)†	Due West
Cloaninger, L. S. (1 A)†	Lykesland
Cloaninger, W. B. (2 A)	Lykesland
Clyburn, J. C. (2 A)	Lancaster
Cobb, D. B. (1 I Ed)	Easley
Cobb, J. E. (2 T)	Cateechee
Cochran, H. E. (2 A)	Donalds
Cochran, J. H. (4 Ent)	Abbeville
Cochran, J. L. (4 V Ag Ed)	Donalds
Coe, C. B. (3 TC)	Richland
Cole, R. A. (3 V Ag Ed)	Chesterfield
Coleman, H. H. (3 E)	Ridgeway
Coleman, I. M. (4 EE)	Pamplico
Coleman, J. K. (4 GS)	Blairs
Coleman, W. J. (2 E)	Aiken
Collings, G. H. (1 GS)†	Clemson College
Commander, R. C. (3 C)	Florence
Compton, C. C. (1 T)†	Laurens
Compton, E. M. (1 E)†	Greenwood
Compton, J. B. (3 I Ed)	Union
Conner, C. G. (2 E)	Lamar
Cook, C. H. (3 GS)	Calhoun
Cook, E. W. (S)	Clemson College
Cook, F. E. (3 E)	Wagener
Cook, T. H. (1 GS)†	Greenville
Cooke, F. N. (3 GS)	Spartanburg
Cooler, C. H. (1 A)†	Ridgeland
Cooler, S. A. (4 D)	Ridgeland
Cooley, J. D. (3 A)†	Chesnee
Cope, J. M. (4 Agr & Hort)	Cope
Copeland, H. R. (1 V Ag Ed)†	Lamar
Copeland, W. E. (3 CE)	Laurens
Copleston, L. M. (1 T)	Charleston
Corbett, J. O. (3 T)†	Shelby, N. C.
Corley, J. S. (1 T)†	Mullins
Cosgrove, H. H. (1 T)†	North Augusta
Cottingham, M. C. (3 T)	Greenville
Courie, A. G. (2 E)	Marion
Courtney, M. I. (1 E)†	Aiken
Cousar, H. N. (3 A)	Latta
Cousar, T. A. (3 E)	Fort Lawn
Cox, J. B. (4 ME)	Marietta, Ga.
Cox, J. L. (2 E)	Union
Cox, T. H. (1 E)†	Calhoun Falls
Cox, W. L. (1 E)†	Chester
Craig, S. J. (2 TC)	Greenville
Crain, V. M. (4 EE)	Clemson College
Cranford, J. C. (1 T)†	Kings Mountain, N. C.
Crawford, D. E. (3 A)	Clemson College
Crawford, E. B. (1 GS)†	Calhoun
Crawford, J. N. (1 E)†	Union
Crawford, N. D. (1 GS)†	Clemson College
Crenshaw, W. J. (1 T)†	Great Falls
Crisp, W. L. (1 E)†	Clayton, Ga.
Crosby, R. D. (1 A)†	Miley
Crouch, A. C. (1 E)†	Clemson College
Crowther, P. H. (3 E)	Anderson
Croxton, W. B. (2 T)	Kershaw
Culler, W. C. (2 I Ed)	Orangeburg
Culpepper, J. M. (1 E)†	Charleston
Cummings, C. E. (4 Hort)	Bishopville
Cummings, C. T. (3 Ar)	Walterboro
Cunningham, W. C. (1 C)†	Williston
Cureton, A. C. (4 D)	Liberty Hill
Cureton, R. W. (3 A)	Greenville
Curry, W. C. (1 A)†	Gray Court
Cutts, W. H. (2 T)	Florence
Dacus, E. E. (2 GS)	Rock Hill
Darby, R. T. (1 E)†	Beaufort
Dashiell, E. L. (1 C)†	Greenville
Davidson, A. W. (S)†	Greenville
Davidson, L. H. (1 T)†	Clinton
Davis, A. F. (1 T)†	Greer
Davis, J. (2 E)	Savannah, Ga.
Davis, J. I. (3 A)	Albany, Ga.
Davis, J. R. (3 GS)†	Laurens
Davis, K. L. (1 V Ag Ed)†	Conway
Dawson, J. H. (3 E)	Orangeburg
Day, D. R. (2 A)	Trenton
Dean, H. C. (1 GS)†	Anderson
Dean, S. C. (3 GS)	Anderson
DeLoach, J. L. (4 Ag Ec)	Saluda
DeLoach, L. A. (1 E)†	Savannah, Ga.
Denny, R. Maynard (1 GS)†	Bishopville
Denny, R. Milton (1 T)†	Vaucluse
Derrick, F. B. (1 E)†	Clayton, Ga.
Deschamps, W. G. (1 GS)†	Bishopville
Dew, J. A. (3 GS)	West Palm Beach, Fla.
DeWitt, M. R. (1 E)†	Darlington
Dickert, J. W. (S)†	Newberry
Dickinson, J. H. (3 Ag Engr)	Bishopville
Dillard, T. W. (1 A)	Liberty
Dillard, W. M. (3 Ag Ec)	Six Mile
Dillard, W. W. (4 Hort)	Greer

Name and Course	Residence
Disher, J. H. (1 E)†	Charleston
Dickson, T. C. (2 T)	Columbia
Dobbins, W. C. (2 GS)	Goldville
Dobbins, W. L. (1 GS)†	Winnsboro
Dobson, W. P. (4 GS)	Greer
Donny, O. G. (3 EE)	Columbia
Doty, A. H. (1 T)†	Winnsboro
Dowling, H. E. (3 E)	Bamberg
Downey, R. E. (2 T)†	Jacksonville, Fla.
Duke, H. B. (3 I Ed)	Madison
Dukes, W. W. (1 E)†	Orangeburg
Duncan, G. A. (2 T)	Whitmire
Duncan, S. E. (3 Ar)	Orangeburg
Dunlap, F. A. (1 T)†	Rock Hill
Dunlap, J. F. (2 T)	Savannah, Ga.
Dunlop, W. K. (2 E)	Arco, Ga.
Dunn, E. W. (1 T)†	Sylacauga, Ala.
DuPre, W. M. (1 A)†	Walhalla
Durban, G. A. (2 GS)	Aiken
Duval, L. S. (3 T)	Social Circle, Ga.
Duvall, W. E. (1 E)†	Cheraw
Dwight, K. B. (1 E)†	Wedgefield
Eaddy, E. A. (3 GS)	Johnsonville
Eaddy, H. E. (3 A)	Hemingway
Earle, S. W. (1 E)†	Clemson College
Earnhardt, M. E. (1 E)†	Spartanburg
Easterlin, D. J. (1 E)†	Charleston
Easterlin, W. B. (1 A)	Walterboro
Easterling, B. B. (2 E)	Barnwell
Eatmon, T. W. (1 Ag Engr)†	Alvin
Edens, H. C. (2 A)	Pickens
Edwards, C. S. (1 T)†	Greer
Edwards, J. H. (1 GS)	Batesburg
Edwards, L. A. (2 Ar)	Highlands, N. C.
Eleazer, G. B. (2 A)	Irmo
Ellerbe, T. L. (1 E)†	Florence
English, W. R. (2 E)	Columbia
Epps, W. M. (2 A)	Latta
Epting, H. H. (2 GS)	Greenville
Eskridge, J. L. (2 T)	Shelby, N. C.
Evans, B. O. (1 GS)†	Anderson
Evans, C. B. (2 Ag Engr)	Abbeville
Evans, D. W. (1 A)†	Elloree
Evans, F. D. (1 A)†	Holly Hill
Evans, J. G. (1 GS)†	Calhoun
Evans, T. H. (1 A)†	Andrews
Evans, W. D. (3 A)	Cheraw
Ezelle, W. B. (2 A)	Chesnee
Fairey, J. K. (1 GS)†	Kingstree
Fant, D. B. (1 T)†	Union
Fant, E. S. (1 T)†	Anderson
Faris, H. M. (1 E)†	Clover
Farley, W. D. (3 A)	Saluda
Farmer, C. E. (3 E)	Warrington, Fla.
Farmer, J. L. (2 GS)	Anderson

Name and Course	Residence
Farmer, R. J. (1 E)†	Warrington, Fla.
Farmer, R. L. (2 Ag Engr)	Florence
Farmer, T. B. (1 T)†	Bath
Farr, D. L. (2 C)	Meyers Mill
Faulkenberry, D. W. (1 T)†	Kershaw
Federline, J. R. (2 T)	Clearwater
Felder, A. M. (1 A)†	Pinewood
Fellers, H. S. (4 GS)	Columbia
Ferguson, J. A. (4 EE)	Fort Mill
Ferguson, J. H. (1 GS)†	Toccoa, Ga.
Ferguson, S. A. (1 E)†	Eastover
Finklea, L. B. (1 A)†	Hyman
Finley, F. F. (2 T)	McCormick
Fleming, W. A. (1 Ar)†	Columbia
Fletcher, A. G. (1 A)†	McColl
Fletcher, J. F. (3 E)	Anderson
Flowers, P. J. (2 A)	Hartsville
Floyd, E. H. (2 A)	Augusta, Ga.
Floyd, J. B. (2 CE)	Lake City
Floyd, J. L. (3 C)	Taylors
Floyd, M. H. (2 E)	Clemson College
Floyd, R. L. (1 A)†	Ridgeland
Fogle, L. G. (1 A)†	Orangeburg
Folger, A. J. (1 T)†	Pickens
Folger, T. M. (2 A)	Pickens
Folk, O. H. (2 V Ag Ed)	Charleston
Folk, W (2 E)	Moncks Corner
Forbes, W. B. (2 C)	Oak Park, Ill.
Ford, H. (3 Ar)	Bennettsville
Foreshaw, T. (3 C)	Garnett
Foster, J. B. (3 A)	Roebuck
Foster, L. L. (2 A)	Roebuck
Frye, C. C. (2 T)†	Avondale, N. C.
Fuller, E. H. (1 T)†	Columbia
Funderburk, B. J. (3 A)	Kershaw
Funk, W. S. (1 GS)†	St. Stephen
Galvanek, E. J. (1 E)†	Carteret, N. J.
Gambill, L. A. (3 CE)	Seneca
Gambrell, J. M. (2 A)	Greenville
Gambrell, R. N. (2 A)†	Seneca
Gandy, E. D. (4 C)	Andrews
Gandy, J. E. (1 A)†	Niagara Falls, N. Y.
Gantt, J. M. (1 E)†	Jefferson
Gantt, W. A. (3 V Ag Ed)	Jefferson
Garrett, I. W. (1 T)†	Greer
Garrett, J. S. (2 T)	Greenville
Garrison, O. H. (1 E)†	Simpsonville
Gasque, H. W. (1 E)†	Walhalla
Gasque, J. O. (3 CE)	Marion
Gause, L. A. (4 Agr)	St. Stephens
Geer, J. R. (3 C)	Belton
Geisberg, H. (1 T)†	Anderson
Geisberg, R. L. (2 E)	Anderson
Gentry, R. B. (4 V Ag Ed)	Starr
George, A. M. (3 A)	Aiken
Gettys, C. M. (3 TC)	Catawba

Name and Course	Residence
Gibbs, J. M. (1 E)†	Decatur, Ga.
Gibert, J. L. (1 V Ag Ed)†	McCormick
Gibson, C. C. (3 EE)	Richburg
Gibson, C. F. (1 A)†	Richburg
Gibson, E. J. (2 A)	Florence
Gibson, J. S. (4 EE)	Florence
Gifford, H. E. (4 I Ed)	Estill
Gilchrist, W. P. (3 A)	Rock Hill
Giles, E. S. (3 E)	Greenwood
Giles, T. R. (1 E)†	Clinton
Gill, W. R. (3 Ar)	Greenville
Gilliam, A. L. (4 GS)	Abbeville
Gilmore, B. N. (2 CE)†	Ravenels
Gilreath, J. F. (4 Agr)	Travelers Rest
Girardeau, J. H. (2 A)	McRae, Ga.
Gloyd, R. (S)†	Athens, Ga.
Glymph, C. S. (1 A)†	Pomaria
Glymph, E. M. (3 A)	Pomaria
Good, C. V. (1 T)†	Laurens
Goodman, C. F. (2 T)	Rock Hill
Goodman, J. (4 GS)	Clemson College
Goodson, R. H. (2 GS)	Hartsville
Goodson, W. H. (1 T)†	Allendale
Gordon, C. P. (4 TC)	Ware Shoals
Gordon, W. M. (2 GS)	Ware Shoals
Gorman, D. (1 TC)	Greenville
Graham, L. V. (1 E)†	Luray
Graham, R. E. (3 GS)	McClellanville
Graves, J. H. (3 T)	Chester
Gray, C. A. (2 E)	Williamston
Gray, W. R. (3 TC)	Greenville
Green, E. T. (1 E)†	Spartanburg
Green, H. A. (3 C)	Anderson
Green, H. C. (1 E)†	Florence
Green, J. H. (2 E)	Clayton, Ga.
Green, M. J. (2 E)	Pacolet Mills
Greene, G. B. (4 GS)	Anderson
Gregory, W. D. (1 E)†	Yonges Island
Griggs, F. O. (3 T)	Darlington
Griner, J. F. (4 Ag Engr)	Meggett
Gross, H. W. (1 E)†	Wellford
Guess, S. C. P. (1 Ag Engr)†	Denmark
Guest, K. M. (3 GS)†	Wagener
Guice, W. D. (1 E)†	Parr
Gunn, H. T. (1 A)†	Rocky Mount, N. C.
Gunter, M. W. (2 A)	Wagener
Gunter, W. E. (1 T)†	Columbia
Gurley, O. L. (3 A)	Spartanburg
Guyton, E. D. (1 GS)†	Marion
Haigler, H. C. (4 EE)	Swansea
Hair, H. B. (3 E)	Columbia
Hair, L. M. (1 E)†	Charleston
Hall, F. M. (1 A)†	Iva
Hall, T. E. (1 C)†	Dillon
Hamilton, F. M. (2 A)	Spartanburg
Hamrick, G. A. (2 E)	Lyman
Hancock, W. F. (1 V Ag Ed)†	Ruby
Hankinson, W. O. (3 T)	Aiken
Hanna, T. R. (1 V Ag Ed)†	Blacksburg
Harbig, G. L. (2 TC)	New Holland, Ga.
Harbin, S. W. (3 CE)	Elloree
Harby, H. D. (2 TC)	Sumter
Hardin, S. F. (3 E)	Chester
Harley, J. R. (1 A)†	Inman
Harling, E. A. (4 CE)	Inman
Harllee, R. L. (1 T)†	Florence
Harmon, C. E. (1 V Ag Ed)†	Gilbert
Harper, J. C. (2 A)	Seneca
Harrell, R. L. (1 E)†	Effingham
Harrell, R. W. (3 A)	Columbia
Harris, B. S. H. (3 I Ed)	Greenville
Harris, F. V. (1 E)†	West Palm Beach, Fla.
Harris, J. B. (2 Ch Engr)	Clemson College
Harris, J. M. (4 GS)	Fort Mill
Harris, J. N. (3 TC)	Belton
Harrison, J. R. (1 T)†	Columbia
Harrison, W. P. (2 GS)	Brunson
Harry, W. B. (1 T)†	Grover, N. C.
Hartledge, J. R. (3 Ar)	Clemson College
Harvey, H. W. (1 E)†	Moncks Corner
Harvin, W. S. (1 A)	Manning
Hastings, H. S. (2 E)	Wellford
Hawkins, B. S. (4 Agr)	Greenville
Hayes, E. D. (2 E)	Little Rock
Heyward, H. T. (3 GS)	Wagener
Head, E. L. (2 T)†	Rockmart, Ga.
Heikkila, E. C. (2 C)	Brooklyn, N. Y.
Helms, C. L. (2 Ch Engr)	Bethune
Henderson, A. F. (1 GS)†	Walterboro
Hendricks, C. C. (1 T)†	Pickens
Hendricks, J. R. (2 A)	Pickens
Hendricks, R. (2 E)	Pickens
Hendricks, R. F. (4 F)	Pickens
Hendricks, T. A. (2 T)	Easley
Henley, C. M. (3 A)	Summerville
Henry, D. H. (3 T)	Clemson College
Henry, J. C. (1 A)†	Gaston
Herlong, F. W. (2 V Ag Ed)	Johnston
Herlong, R. H. (2 V Ag Ed)	Johnston
Herring, W. T. (1 E)†	Rocky Mount, N. C.
Hester, J. J. (1 E)†	Troy
Heyward, R. C. (1 T)†	Rockingham, N. C.
Hickey, W. E. (2 E)	Florence
Hicks, R. B. H. (2 A)	Hartsville
Hiller, J. T. (4 Ent)	Chapin
Hills, W. A. (1 Ag Engr)†	Johns Island
Hilton, R. E. (2 T)	New Brookland
Hinson, C. R. (3 A)	Kershaw
Hinson, L. C. (2 T)	Scranton
Hiott, W. B. (3 T)	Round
Hitt, J. R. (1 Ar)†	Clinton
Hodges, G. H. (1 E)†	Laurens
Hoefer, T. M. (1 T)†	Columbia

Name and Course	Residence
Hoffman, J. C. (1 A)†	Blythewood
Hoffman, S. O. (1 E)†	McBee
Holcombe, J. H. (2 E)	Greenville
Hollis, C. H. (4 Ag C)	Richburg
Hollis, J. T. (1 V Ag Ed)†	Central
Hollis, M. C. (2 GS)	Winfield, Ala.
Holman, G. (1 A)†	North Augusta
Holt, E. R. (2 Ar)	Greenville
Holtzendorff, P. B. (S)	Clemson College
Hood, H. R. (4 EE)	Clemson College
Hopkins, J. H. (3 A)	Walhalla
Horton, B. T. (3 TC)	Belton
Horton, E. V. (1 E)†	Belton
Houck, S. H. (1 A)†	Cameron
Howard, E. H. (2 GS)	Aiken
Howard, E. M. (1 T)†	Augusta, Ga.
Howell, M. P. (2 A)	Walterboro
Howle, J. B. (2 A)	Hartsville
Howle, V. W. (1 E)†	Andrews
Huchting, J. F. (2 E)	Charleston
Hudgens, R. L. (1 E)†	Spartanburg
Hudgin, D. E. (1 C)†	Greenville
Hudgin, L. M. (4 EE)	Greenville
Huff, J. R. (1 A)†	Piedmont
Huff, P. D. (3 E)	Piedmont
Huff, W. D. (1 GS)†	Darlington
Hughes, R. M. (3 C)	Greer
Hughlett, O. D. (2 C)	Trappe, Md.
Hunt, J. M. (1 Ar)†	Anderson
Hunt, R. M. (4 EE)	Walhalla
Hunter, G. D. (1 GS)	West Union
Hunter, J. S. (2 E)	Clemson College
Husbands, D. L. (3 E)	Florence
Hutcheson, A. V. (1 V Ag Ed)†	Clemson College
Hutcheson, C. E. (2 GS)	Clemson College
Hutto, F. E. (3 T)†	Bamberg
Inabinet, C. J. (2 GS)	Orangeburg
Inderfurth, K. H. (1 T)†	Mystic, Conn.
Jackson, F. S. (1 A)	Landrum
Jackson, M. R. (1 A)	Manning
Jackson, N. M. (2 CE)	Parris Island
Jackson, R. V. (1 C)†	Wedgefield
Jackson, T. H. (S)	Clemson College
James, J. F. (4 Ar)	Sumter
Jameson, J. H. (1 GS)†	Easley
Jaudon, M. W. (1 A)†	Tillman
Jeffords, A. B. (2 A)	Lamar
Jeffords, J. S. (3 CE)	Lamar
Jeffries, F. A. (4 I Ed)	Union
Jenkins, F. L. (3 E)	Charleston
Jenkins, R. M. (2 E)	St. Charles
Jenkins, R. W. (2 E)	Yonges Island
Jeter, J. M. (2 A)	Union
Johnson, J. E. (1 T)	Florence
Johnson, J. F. (1 A)†	Piedmont
Johnson, J. T. (2 T)	Winnsboro
Johnson, M. E. (1 E)†	Sharon
Johnson, M. H. (4 V Ag Ed)	Ward
Johnson, O. L. (3 E)	Newberry
Johnson, T. C. (1 E)†	Clinton
Johnson, W. L. (1 V Ag Ed)†	Cassatt
Johnstone, T. K. (3 GS)	Newberry
Johnstone, W. A. (1 E)†	Georgetown
Jones, B. W. (1 E)†	Easley
Jones, C. (1 A)†	Darlington
Jones, H. B. (3 GS)	Greenville
Jones, H. T. (1 I Ed)†	Waterloo
Jones, H. Z. (2 A)	Dacusville
Jones, J. C. (2 GS)	Aiken
Jones, J. W. (2 A)	Greenville
Jones, K. C. (1 E)†	Belton
Jones, R. J. (1 T)†	Macon, Ga.
Jones, R. L. (2 A)	Timmonsville
Jones, R. M. (1 T)†	Ward
Jones, W. T. (3 A)	Charleston
Jordan, B. S. (1 E)†	Ridge Spring
Josey, D. K. (1 A)†	St. Charles
Joyner, N. P. (1 A)†	Ward
Kanapaux, C. (4 EE)	Charleston
Kay, A. V. (1 T)†	Greenville
Kay, H. R. (2 GS)	Anderson
Kee, J. M. (1 E)†	Rock Hill
Keller, M. A. (2 CE)	Greenwood
Kelly, L. G. (2 GS)†	Anderson
Kerrison, E. H. (1 A)†	Charleston
Kibler, E. L. (2 GS)	Columbia
Kilgore, C. R. (1 Ch Engr)†	Bishopville
Kinard, J. D. (3 A)	Ninety Six
King, C. H. (3 TC)	Abbeville
King, F. M. (1 T)†	Adairsville, Ga.
King, J. C. (2 V Ag Ed)	Loris
King, J. M. (1 T)†	Easley
King, J. N. (1 E)†	Williamston
King, R. E. (4 CE)	Clemson College
King, S. T. (3 E)	Pendleton
King, W. A. (3 A)	Due West
Kinghorn, A. M. (3 CE)	Beaufort
Kirchner, G. F. (S)	Jacksonville, Fla.
Kirk, H. L. (4 EE)	Rock Hill
Kirkegard, H. B. (4 C)	Ansonia, Conn.
Kissam, R. R. (2 GS)	Orangeburg
Kissam, W. B. (1 E)†	Denmark
Kitchens, E. L. (1 T)†	Laurens
Knight, C. V. (3 V Ag Ed)	Enoree
Knight, F. A. (4 I Ed)	Angelus
Knox, G. M. (1 T)†	Clinton
Kolb, T. A. (4 EE)	Charleston
Krickhan, W. F. (2 E)	Asheville, N. C.
Lachicotte, W. S. (1 E)†	Charlotte, N. C.

Name and Course	Residence
Lafaye, G. E. (4 Ar)	Columbia
LaGrone, A. W. (2 TC)	Edgefield
Lancaster, J. Z. (2 T)	Pacolet Mills
Land, J. E. (4 Ag C)	Filbert
Lane, M. (1 V Ag Ed)†	Dillon
Laney, K. S. (2 T)	Cheraw
Lanford, H. P. (1 E)†	Greenville
Lanford, O. L. (3 TC)	Lanford
Langford, M. H. (3 A)	Blythewood
Langford, P. W. (1 A)†	Blythewood
Langston, P. Q. (3 TC)	Conway
Langston, R. H. (1 E)†	Florence
Lanham, B. T. (2 A)	Edgefield
LaRoche, J. J. (1 E)†	Charleston
LaRoche, P. G. (1 E)	North Charleston
Latham, J. R. (1 Ar)†	Easley
Lathem, J. B. (2 E)	Easley
Law, H. L. (2 GS)	Hartsville
Law, W. P. (1 Ag Engr)†	Darlington
Lawhorn, H. L. (1 T)†	Union
Lawrence, R. E. (1 E)†	Effingham
Lawton, W. A. (2 GS)	Thacker, W. Va.
Lay, C. E. (1 A)†	Salem
Ledford, E. M. (S)†	Walhalla
Lee, H. R. (2 V Ag Ed)	Greer
Lee, W. A. (3 V Ag Ed)	Belvedere
Legare, T. G. (1 E)†	Yonges Island
Leitner, H. D. (2 T)	Graniteville
Leitner, W. A. (1 A)†	Marion
Leland, R. B. (1 GS)†	McClellanville
Leland, W. B. (4 EE)	McClellanville
LeMaster, H. W. (2 GS)	Gaffney
Lemmon, F. M. (4 Hort)	Winnsboro
Lemmon, R. H. (2 A)	Winnsboro
Lemon, R. (2 GS)	Barnwell
Leonard, O. W. (2 T)†	Spartanburg
Leonhirth, J. (1 E)†	Sumter
LeRoy, R. E. (2 E)	Willington
Lever, J. H. (1 A)†	Columbia
Lewis, F. H. (2 V Ag Ed)	Loris
Lewis, H. D. (2 GS)	Mullins
Lewis, J. M. (3 GS)	Mullins
Lewis, J. W. (2 E)	Laurens
Lewis, W. K. (2 TC)	Columbia
Linder, V. F. (4 Hort)	Mt. Holly
Linley, J. W. (1 Ar)†	Anderson
Lipscomb, J. L. (4 C)	Columbia
Lipscomb, W. H. (3 T)†	Greenville
Little, C. B. (2 T)	Spartanburg
Littlejohn, S. M. (3 TC)	Clemson College
Lofton, P. S. (3 Agr)	McClellanville
Lokey, J. D. (1 T)†	Winnsboro
Long, B. (2 A)	Conway
Lowery, E. H. (1 A)†	Seneca
Loyless, E. M. (1 E)†	Greenwood
Lunn, L. D. (2 E)	Darlington
Lyons, R. A. (3 TC)	Anderson
Lytton, C. B. (1 E)†	Gastonia, N. C.
McAdams, R. M. (2 T)	Townville
McAdams, W. N. (1 Ag Engr)†	Level Land
McAlhany, C. W. (1 T)†	Columbia
McAlhany, J. W. (2 A)	Branchville
McAlister, H. B. (1 T)†	Pendleton
McCarley, G. H. (1 A)†	Anderson
McCarter, E. H. (3 TC)	Rock Hill
McCarthy, E. A. P. (2 GS)	White Oak, Ga.
McClanahan, M. T. (4 Ar)	Clemson College
McCleskey, S. L. (2 E)	Greenwood
McClure, W. T. (2 A)	Westminster
McColl, W. M. (1 T)†	McColl
McConnell, S. W. (3 A)	Anderson
McConnell, T. S. (2 A)	Anderson
McConnell, W. B. (4 D)	Belton
McCorkle, N. C. (2 E)	York
McCown, C. H. (2 A)	Anderson
McCoy, P. H. (1 T)†	Rock Hill
McCrackin, J. T. (1 A)†	Newberry
McCrary, R. M. (3 T)	Anderson
McCrary, R. R. (1 T)†	Clinton
McCutcheon, W. G. (1 T)†	Bishopville
McDonald, L. P. (1 T)†	Greenville
McDowell, J. J. (2 E)	Kershaw
McEachern, E. H. (1 A)†	Longtown
McFarland, P. A. (2 T)	Avon Park, Fla.
McGee, J. W. (3 A)	Starr
McGee, K. W. (4 D)	Belton
McGee, T. E. (4 AH)	Starr
McGregor, W. C. (3 GS)	Anderson
McGougan, E. L. (1 A)†	Green Sea
McGowan, H. R. (1 I Ed)†	Chester
McHugh, C. M. (3 E)	Clemson College
McKain, W. J. (1 E)†	Spartanburg
McKelvey, W. A. (1 A)	Pelzer
McKenzie, M. C. (2 Ag Engr)	Eastover
McKeown, C. M. (1 E)†	Chester
McKinney, H. H. (1 A)†	Chesnee
McKinney, P. E. (1 E)†	Chesnee
McKinney, W. B. (2 V Ag Ed)	Easley
McKorell, R. B. (1 E)†	Hartsville
McLaurin, C. H. (4 GS)	Clio
McLeod, J. D. (1 A)†	Kershaw
McMahan, C. A. (4 GS)	Seneca
McMaster, E. A. (3 T)	Winnsboro
McMillin, J. P. (4 CE)	Inman
McNair, J. D. (1 T)†	Salley
McNamara, T. F. (2 TC)	Taylors
McNeely, T. L. (1 Ar)	Asheville, N. C.
McPeters, A. P. (2 TC)	Savannah, Ga.
McPhail, W. A. (4 Agr)	Iva
McSwain, A. T. (4 ME)	LaFrance
McSwain, J. W. (2 T)	LaFrance
McWhorter, J. C. (2 Ag Engr)†	Spartanburg
MacLauchlin, W. T. (1 GS)†	Chester

Name and Course	Residence
Macomson, W. W. (1 E)†	Spartanburg
Madden, J. H. M. (4 C)	Columbia
Mahaffey, C. B. (1 T)†	Lancaster
Mahaffey, D. M. (2 I Ed)	Townville
Mahon, D. G. (3 GS)	Calhoun Falls
Mahon, J. M. (2 CE)	Calhoun Falls
Major, W. B. (3 T)	Greenwood
Malone, H. B. (3 TC)	Chester
Malone, H. T. (2 GS)	Hartsville
Malphrus, L. D. (1 A)†	Ridgeland
Maness, R. C. (2 CE)	Georgetown
Mann, J. P. (2 E)	Savannah, Ga.
Manning, R. W. (1 T)†	Ames, Iowa
Manning, W. R. (3 A)	Anderson
Marsh, B. G. (1 E)	Gaffney
Marshall, C. F. (4 CE)	Anderson
Marshall, G. L. (3 CE)	Greenwood
Marshall, J. D. (1 T)†	Ridgeland
Marshall, J. L. (4 CE)	Clemson College
Martin, G. M. (1 GS)	Westminster
Martin, J. A. (3 A)	Anderson
Martin, J. F. (3 E)	Anderson
Martin, L. L. (3 E)	Anderson
Martin, R. H. (2 TC)	Easley
Martin, R. H. (S)†	West Union
Martin, R. V. (2 C)	Savannah, Ga.
Martin, R. W. (1 E)†	Florence
Martin, T. I. (2 E)	Florence
Marvin, E. A. (1 A)†	White Hall
Massey, J. T. (1 E)†	LaGrange, Ill.
Massingale, H. E. (2 E)	Greenville
Mattison, J. R. (4 Ent)	Calhoun
Mauldin, W. P. (4 C)	Liberty
Mauney, E. B. (3 E)	Greenville
Mayne, C. (1 T)†	Winder, Ga.
Mayes, L. E. (2 GS)	Fair Play
Mayes, R. E. (1 GS)	Yemassee
Meadows, J. H. (2 GS)	Dillon
Means, A. (3 V Ag Ed)	Greenville
Meares, L. E. (1 A)†	McBee
Medlin, S. S. (1 E)	Florence
Medlock, H. H. (1 E)†	Augusta, Ga.
Mellette, F. M. (3 V Ag Ed)	Boykin
Melton, C. L. (2 E)	Cheraw
Merritt, H. A. (2 GS)	Rock Hill
Merritt, J. B. (1 A)†	Easley
Merritt, S. L. (3 TC)	Rock Hill
Metz, J. (4 C)	Charlotte, N. C.
Meyers, C. E. (1 E)†	Greenville
Middleton, C. F. (2 T)†	Charleston
Mikell, J. J. (3 A)	Edisto Island
Miley, J. E. (2 A)	Brunson
Miller, B. (1 A)†	Greenville
Miller, H. E. (1 A)†	Ridgeland
Miller, M. M. (1 E)†	Charleston
Mintz, F. C. (2 E)	Blacksburg
Misdom, H. E. (3 CE)	Carteret, N. J.
Misdom, R. C. (1 E)†	Rahway, N. J.
Mitchell, H. (1 A)†	Greenville
Mitchell, W. A. (1 GS)†	Clemson College
Montgomery, S. W. (2 CE)	Cartersville, Ga.
Moody, R. B. (1 GS)†	Columbia
Moon, J. W. (2 A)	Greenville
Moore, D. C. (4 EE)	Gainesville, Ga.
Moore, H. W. (3 GS)	Walterboro
Moore, J. C. (1 A)†	Travelers Rest
Moore, J. P. (3 A)	Conway
Moore, T. A. (1 E)†	Rock Hill
Moorer, C. P. (1 E)†	Harleyville
Moorer, W. M. (2 V Ag Ed)	Lodge
Moorhead, J. J. (2 A)	Sandy Springs
Morgan, B. T. (1 T)†	Rockmart, Ga.
Morgan, C. G. (S)†	Rome, Ga.
Morgan, C. L. (S)	Clemson College
Morgan, J. W. (1 E)†	Savannah, Ga.
Morgan, R. A. (3 E)	Central
Morris, T. W. (1 GS)†	Olar
Morrow, W. F. (1 T)†	Greenville
Moseley, S. T. (3 GS)	Ridgeland
Moss, A. E. (3 GS)	Charleston
Motes, M. M. (1 E)†	Mountville
Mouchet, W. D. (3 A)	Starr
Mouchet, W. R. (1 A)†	Starr
Moulton, D. V. (1 E)†	Easley
Muldrow, H. G. (1 T)†	Bishopville
Muldrow, J. E. (2 E)	Bishopville
Mundy, G. W. (1 T)†	Abbeville
Murph, J. W. (1 GS)†	Spartanburg
Murph, M. L. (3 CE)	Seneca
Murphy, R. B. (3 Ar)	Charleston
Murray, J. W. (1 GS)†	Charleston
Murray, R. M. (1 A)†	Bridgeport, Pa.
Mustard, A. C. (4 EE)	Charleston
Myers, J. I. (3 E)	Greenwood
Nathans, R. M. (2 A)	Charleston
Neal, J. R. (4 V Ag Ed & AH)	Campobello
Neighbors, H. P. (1 T)†	Forest City, N. C.
Nelms, W. L. (3 E)	Orangeburg
Neuffer, J. M. (2 T)	Abbeville
New, H. E. (4 T)	Greenville
Newman, B. F. (2 E)	McBee
Nickles, B. H. (4 T)	Hodges
Nickles, J. B. (1 E)†	Hodges
Nichols, G. M. (2 C)	Savannah, Ga.
Nisbet, J. D. (2 E)	Van Wyck
Nisbet, W. O. (3 A)	Van Wyck
Norris, J. F. (2 A)	Belton
Norris, R. R. (1 E)†	Calhoun Falls
Norton, E. (1 E)†	Conway
Norton, M. (1 GS)†	Gibson, N. C.
Norton, W. B. (1 GS)†	Marion
Nottingham, H. D. (4 CE)	Elberton, Ga.

Name and Course	Residence
O'Cain, R. K. (2 GS)	Orangeburg
Odom, E. H. (2 CE)	Salters Depot
Oglesby, A. (1 GS)†	Elberton, Ga.
O'Kelly, G. R. (3 Ag Engr)	Bishopville
Oliver, J. H. (1 E)†	Savannah, Ga.
Oliver, H. M. (2 C)	Hamer
Olson, E. S. (1 C)†	Ossining, N. Y.
Orr, C. W. (3 GS)	Pendleton
Orr, S. M. (3 E)	Anderson
Otey, P. K. (2 T)	Sumter
Owen, W. C. (2 V Ag Ed)	Central
Pace, J. C. (1 A)†	Orangeburg
Page, D. D. (3 CE)	Dillon
Page, S. Watson (4 C)	Greenwood
Page, S. Walter (1 T)†	Woodruff
Palmer, J. B. (1 E)†	Timmonsville
Parkins, C. A. (4 T)	Greenville
Parker, J. P. (1 A)†	Graniteville
Parker, J. W. (1 GS)†	Ebenezer
Patterson, A. C. (2 T)	Rock Hill
Patterson, F. D. (2 E)	Valhalla, N. Y.
Patterson, G. W. (1 A)†	McCormick
Patterson, I. H. (1 T)†	Rock Hill
Paulsen, G. C. (1 E)†	Newberry
Payne, A. C. (1 E)†	Cartersville, Ga.
Payne, C. H. (1 A)†	Piedmont
Payne, W. J. (1 E)†	Charlotte, N. C.
Payne, W. O. (1 A)†	Piedmont
Peabody, P. B. (1 E)†	Coral Gables, Fla.
Peden, T. E. (1 T)†	Gray Court
Pell, S. H. (1 T)†	Walhalla
Pennington, L. C. (4 GS)	Clemson College
Perez, E. F. (1 E)†	Santo Domingo
Perez, S. V. (3 E)	Santo Domingo
Perry, L. A. (2 CE)	Gresham
Perry, W. E. (2 E)	Calhoun
Phillips, E. (3 E)	Chicago, Ill.
Phillips, J. K. (1 E)	Belton
Piercy, B. E. (2 A)	Woodruff
Pike, C. E. (1 Ag Engr)†	Calhoun
Pinson, J. B. (1 GS)†	Cross Hill
Platt, W. M. (4 C)	Summerville
Plowden, H. A. (4 ME)	Manning
Plyler, C. G. (1 T)†	Lancaster
Pollitzer, R. G. (1 Ag Engr)†	Beaufort
Ponder, J. E. (2 A)	Dacusville
Poole, Y. E. (1 Ag Engr)†	Spartanburg
Pope, D. T. (4 Hort)	Edisto Island
Porcher, F. P. (3 EE)	Charleston
Porter, G. F. (3 E)	Pickens
Powell, J. B. (1 E)†	West Palm Beach, Fla.
Powell, J. E. (4 T)	Bennettsville
Prause, W. K. (1 E)†	Charleston
Prestwood, J. G. (2 E)	Savannah, Ga.
Price, B. G. (4 EE)	Walterboro
Price, D. G. (2 T)	Walterboro
Price, E. B. (1 E)†	Walterboro
Price, H. S. (2 C)	Walterboro
Prince, A. G. (1 Ag Engr)†	Abbeville
Pritchett, J. U. (1 GS)†	Saluda
Quattlebaum, C. P. (3 E)	Johnston
Quinn, J. A. (1 E)†	York
Rainey, B. W. (1 T)†	Woodruff
Rambo, E. K. (3 Ag Engr)	Ninety Six
Rampey, C. T. (3 T)	Clinton
Ramsay, T. E. (2 A)	Calhoun
Ramseur, J. H. (2 E)	Cheraw
Rankin, G. H. (3 V Ag Ed)	Tamassee
Rawl, H. J. (1 E)†	Lexington
Rawl, W. L. (1 E)†	Leesville
Rawlinson, W. J. (2 A)	Jordan
Rawls, O. G. (4 CE)	Clemson College
Ray, E. C. (1 C)†	Savannah, Ga.
Ready, E. L. (S)	Johnston
Reams, J. F. (1 T)†	Bishopville
Reams, J. T. (2 E)	McCormick
Redfearn, D. T. (2 GS)	Wadesboro, N. C.
Reese, F. L. (1 E)†	Abbeville
Reeves, C. L. (1 T)†	Anderson
Register, J. R. (4 Ag Engr)	Lydia
Reid, C. B. (2 GS)	Richburg
Reynolds, J. A. (1 E)†	Bishopville
Reynolds, R. J. (1 T)†	Great Falls
Reynolds, R. M. (1 V Ag Ed)†	Lamar
Rhinehardt, W. A. (3 T)	Anderson
Rhoden, J. T. (2 T)	Edgefield
Rhodes, F. K. (4 EE)	Florence
Rice, C. W. (3 CE)	Belton
Richardson, Duke (4 V Ag Ed)	Marion
Richardson, Draytford (1 E)†	Gresham
Richardson, H. B. (3 A)	Summerton
Richardson, R. H. (4 Ag Ec)	Pendleton
Richardson, T. E. (1 A)†	Barnwell
Richbourg, J. R. (3 E)	Liberty
Richey, J. (3 CE)	Greenwood
Rickards, T. M. (2 E)	West Palm Beach, Fla.
Rickenbaker, J. B. (1 E)†	Cameron
Riddle, E. S. (1 E)†	Walterboro
Riddle, J. H. (1 T)†	York
Rigdon, G. G. (1 A)	Pickens
Riley, J. E. (2 T)	Charleston
Rion, J. W. (1 A)†	Columbia
Risher, H. B. (1 E)†	Charleston
Rivers, J. T. (4 D)	Brunson
Roach, T. B. (3 T)	Columbia
Roberts, D. H. (2 T)	Laurens
Roberts, H. E. (1 E)	Columbia
Robinson, C. N. (3 Ar)	Lancaster
Robinson, E. D. (3 GS)	Spartanburg
Robinson, F. I. (4 EE)	Greenwood
Robinson, R. Warren (2 GS)†	Anderson

Name and Course	Residence
Robinson, R. William (1 T)†	Columbia
Rochester, O. J. (3 V Ag Ed)	Salem
Rogers, G. F. (2 E)	Mauldin
Rogers, H. C. (1 Ag Engr)†	Clio
Rogers, H. M. (S)	Dillon
Rogers, L. T. (2 C)	Dillon
Rogers, R. T. (4 C)	Spartanburg
Rogers, W. A. (1 GS)†	Marion
Rogerson, R. C. (1 E)†	Andrews
Ronemous, J. C. (1 E)†	Charleston
Ruff, W. H. (1 T)†	Ridgeway
Ruffin, C. L. (3 E)	Woodruff
Rush, W. W. (1 V Ag Ed)†	Camden
Russell, J. F. (4 C)	St. Stephen
Ryan, E. L. (2 A)	Trenton
Sadler, H. M. (1 GS)†	Ashepoo
Salley, C. M. (4 Ag Engr)	Salley
Salley, F. W. (3 Ag Engr)	Orangeburg
Salley, R. B. (3 E)	Orangeburg
Sander, H. F. (2 E)	Charleston
Sanders, A. L. (1 T)†	Pelzer
Sanders, A. S. (1 T)†	Camden
Sanders, J. D. (4 WD)	Camden
Sanders, J. E. (1 A)†	Hagood
Sanders, J. L. (1 T)†	Anderson
Sanders, J. R. (2 A)	Anderson
Sanders, R. W. (2 A)	Fairfax
Saunders, W. H. (1 A)†	Walterboro
Saverance, C. R. (1 Ag Engr)†	Bethune
Saverance, W. G. (2 A)	Lamar
Schirmer, C. C. (1 E)†	Charleston
Schumpert, W. M. (4 GS)	McCormick
Scott, R. F. (3 E)	Blacksburg
Scott, W. L. (3 C)	Walhalla
Searson, C. B. (1 A)†	Hampton
Seawright, J. H. (1 T)†	Anderson
Segars, H. K. (2 A)	Hartsville
Seigler, C. E. (1 E)†	Greenwood
Seigler, S. J. (2 A)	Anderson
Settle, J. L. (1 GS)†	Landrum
Shands, J. H. (2 V Ag Ed)	Florence
Shanklin, E. H. (1 T)†	Pendleton
Shell, J. C. (1 T)†	Laurens
Shell, V. M. (2 Ar)	Spartanburg
Shelley, D. A. (3 A)	Marion
Shelley, J. C. (1 A)†	Marion
Shirley, J. H. (3 E)	Florence
Shook, H. C. (2 V Ag Ed)	Greenville
Shore, H. T. (2 T)	Columbia
Shuford, M. I. (2 CE)	Georgetown
Shuler, E. L. (2 GS)	Eutawville
Simons, R. L. (3 E)	Johnston
Sims, R. L. (1 A)†	Mountain Rest
Simpson, J. L. (3 E)	Williamston
Simpson, R. D. (1 T)	LaFrance
Simpson, W. M. (2 E)	Williamston
Skardon, B. N. (1 E)†	Walterboro
Sloan, E. D. (1 GS)†	Walhalla
Sloan, E. (4 CE)	Charleston
Smart, S. D. (4 WD)	Clemson College
Smith, B. E. (3 TC)	Graniteville
Smith, E. H. (1 A)†	Abbeville
Smith, E. R. (1 C)†	Charleston
Smith, F. B. (2 Ag Engr)	Johnston
Smith, G. L. (4 GS)	Pendleton
Smith, J. W. (3 C)	Greenville
Smith, W. C. (1 T)†	Johnston
Smith, W. G. (4 Agr)	Mullins
Smyth, M. H. (2 CE)	Hendersonville
Snipes, T. F. (3 T)	Greenwood
Snowden, J. G. (4 CE)	Charleston
Snyder, A. (2 T)	Seneca
Spann, S. R. (4 EE)	Columbia
Spearman, M. W. (3 GS)	Anderson
Spears, R. C. (1 T)†	Union
Speer, G. W. (2 A)	Anderson
Speer, W. A. (2 Ar)	Anderson
Speights, J. M. (1 E)	Walterboro
Spencer, F. A. (4 EE)	Florence
Sprawls, P. C. (1 V Ag Ed)†	Montmorenci
Stackhouse, J. W. (1 E)†	Mullins
Stackhouse, W. B. (1 V Ag Ed)†	Dillon
Stafford, T. I. (1 T)†	Charleston
Stallings, J. B. (1 Ag Engr)†	Williamston
Stallworth, T. A. (2 A)	Callison
Stalvey, A. E. (1 E)†	Conway
Stanley, T. E. (1 Ar)†	Marion
Stanton, L. M. (2 A)	McColl
Starr, P. H. (1 T)	Walterboro
Steever, R. G. (2 E)†	Lykens, Pa.
Stevens, D. A. (3 E)	Yonges Island
Stevens, E. A. (3 GS)	Bennettsville
Stevenson, C. O. (3 TC)	Marion
Stewart, G. H. (4 Ag Engr)	Florence
Stokely, D. R. (1 E)†	Greenville
Stokely, M. M. (3 E)	Greenville
Stokes, H. G. (1 GS)†	Gray Court
Stokes, T. H. (3 A)†	Greer
Stone, David B. (1 Ag Engr)†	Inman
Stone, DeWitt B. (2 C)	Williamston
Strange, T. S. (4 D)	Union
Stribling, M. W. (2 E)	Habersham, Ga.
Strohecker, H. O. (2 E)	Charleston
Stuckey, A. H. (2 T)	Bishopville
Sturgis, D. C. (3 A)	Rock Hill
Suggs, L. D. (4 Hort)	Loris
Sumner, E. S. (2 E)†	Society Hill
Sutherland, J. B. (2 GS)	Anderson
Sutton, M. R. (1 T)†	Monroe, N. C.
Swails, A. C. (3 GS)	Kingstree
Swearingen, C. R. (2 A)	Trenton
Sweat, C. H. (1 E)†	Walterboro
Sweeting, R. C. (2 E)	Charleston

Name and Course	Residence
Switzer, P. K. (1 GS)†	Union
Tamplet, G. L. (1 E)†	Georgetown
Tanner, J. C. (1 Ag Engr)†	Greenville
Taylor, A. W. (1 T)†	Charleston
Taylor, G. M. (2 TC)	Nichols
Taylor, H. M. (1 T)†	Greenwood
Taylor, S. P. (3 C)	Columbia
Taylor, S. V. (1 A)	Greeleyville
Teal, V. F. (1 V Ag Ed)†	Chesterfield
Terrell, L. E. (1 E)†	Greenville
Terry, B. B. (1 E)†	Mullins
Thackston, R. F. (3 TC)	Anderson
Thackston, W. M. (4 D)	Greenville
Theus, B. H. (1 T)†	Estill
Thigpen, J. A. (1 Ar)†	Florence
Thode, J. R. (4 TC)	Walhalla
Thomas, A. C. (1 A)†	Hampton
Thomas, B. F. (3 E)	Fairfax
Thomas, F. B. (3 V Ag Ed)	Fairfax
Thomas, H. J. (1 A)†	Hodges
Thomas, R. C. (1 T)†	Lamar
Thomas, W. A. (1 E)†	Chadbourn, N. C.
Thomas, W. M. (3 E)	Pickens
Thompson, A. R. (1 V Ag Ed)†	Bowman
Thompson, F. N. (1 T)†	Leesville
Thompson, S. N. (1 C)†	Starr
Thompson, W. A. (1 E)†	Shelby, N. C.
Thomson, J. W. (1 GS)†	Seneca
Thrailkill, W. H. (1 A)	Ridge Spring
Tibbs, J. H. (2 E)	Great Falls
Timmerman, E. R. (2 A)	Westminster
Tindal, N. E. (4 EE)	Pinewood
Tobey, P. L. (4 TC)	Hampton
Todd, A. W. (3 E)	Anderson
Todd, J. S. (3 T)	Laurens
Todd, J. W. (3 A)	Walhalla
Todd, W. P. (1 T)†	Laurens
Trakas, P. A. (1 E)†	Charleston
Travis, H. C. (2 E)	Charleston
Tribble, F. V. (3 TC)	Anderson
Tripplett, W. L. (4 TC)	Chester
Troutman, J. C. (2 T)	Wedgefield
Truesdale, G. G. (1 E)†	Kershaw
Truesdale, L. F. (3 V Ag Ed)	Kershaw
Truluck, J. H. (1 Ar)†	Lynchburg
Tupper, G. L. (2 A)	Summerville
Tupper, J. L. (1 GS)†	Summerville
Turner, J. G. (1 T)†	Winnsboro
Underwood, J. F. (1 T)†	Piedmont
Valentine, W. S. (1 A)†	Columbia
Vallentine, M. C. (2 GS)	Cope
Vance, Z. (1 A)†	Owings
Varn, J. D. (1 E)†	Charleston
Vaughan, C. R. (1 E)†	Greenville
Vereen, T. L. (1 A)†	Latta
Verner, A. C. (1 T)†	Piedmont
Vickery, K. N. (1 E)†	Hartwell, Ga.
Wade, F. C. (4 GS)	Lowrys
Wade, G. H. (1 A)†	New York, N. Y.
Waldrop, J. E. (2 E)	Greenville
Walker, D. O. (1 E)†	Johnston
Walker, G. B. (2 T)†	Greenville
Walker, H. L. (3 A)	Edgemoor
Walker, H. V. (1 T)†	Greenville
Walker, M. E. (3 E)	McCormick
Wall, D. H. (1 A)†	Ridgeland
Wall, F. G. (1 E)†	Timmonsville
Wall, H. M. (2 GS)	Greer
Wall, J. B. (2 T)	Spartanburg
Wall, J. W. (2 GS)	Timmonsville
Wallace, C. N. (1 T)†	Greenville
Wallace, W. H. (3 Ar)	Central
Walpole, J. S. (3 CE)	Beaufort
Wannamaker, G. L. (4 V Ag Ed)	St. Matthews
Ward, E. P. (2 TC)	Graniteville
Wardlaw, F. C. (1 Ag Engr)†	Belton
Warren, G. C. (2 GS)	Sumter
Waters, A. R. (1 E)†	Beaufort
Waters, L. E. (1 T)†	Bamberg
Watkins, D. W. (2 E)	Clemson College
Watkins, L. L. (3 T)	Greer
Watkins, R. E. (1 GS)†	Pendleton
Watkins, T. G. (2 E)	Pendleton
Watson, A. C. (2 GS)	Columbia
Watson, A. L. (1 E)†	Anderson
Watson, C. M. (3 E)	Anderson
Watson, C. W. (3 GS)	Navy Yard
Watson, J. D. (S)†	Johnston
Watson, R. M. (2 A)	Ridge Spring
Way, G. D. (3 Ar)	Newberry
Way, W. A. (1 E)†	Brunswick, Ga.
Wearn, R. B. (2 TC)	Newberry
Webb, H. A. (4 TC)	Greenwood
Webb, W. W. (4 TC)	Anderson
Weeks, B. E. (4 I Ed)	North Augusta
Welch, E. S. (2 E)	Charleston
Welch, N. S. (1 T)†	Carlisle
Welch, S. B. (1 A)†	Adams Run
Wells, E. D. (1 GS)	Savannah, Ga.
Werle, A. (2 Ch Engr)†	Charleston
Wever, L. R. (2 E)	Savannah, Ga.
White, C. G. (2 GS)	Tucapau
White, H. M. (1 E)†	Spartanburg
Wicker, T. P. (2 E)	Newberry
Wieters, G. (2 T)	Charleston
Wigington, T. A. (2 A)	Easley
Wilburn, J. M. (3 CE)	Union
Wilburn, W. C. (3 E)	Kings Creek
Wiles, W. C. (1 A)†	Columbia

Name and Course	Residence
Wilkes, T. J. (1 T)†	Charlotte, N. C.
Wilkinson, J. C. (1 GS)†	Spartanburg
Williams, A. M. (3 TC)	Columbia
Williams, B. G. (1 A)†	Brunson
Williams, B. H. (3 Ar)	Dacusville
Williams, J. B. (1 A)†	Dacusville
Williams, L. A. (3 E)	Charleston
Williamson, S. A. (1 GS)†	Aiken
Williford, E. A. (2 GS)	Rock Hill
Willis, C. A. (2 T)	Clemson College
Wilson, F. H. (1 A)†	Fort Mill
Wilson, H. E. (2 E)	Chesterfield
Windell, J. R. (2 E)	Rock Hill
Windham, K. H. (1 E)†	Lamar
Wingard, J. T. (2 T)	Lexington
Winn, J. W. (3 I Ed)	Walterboro
Witherspoon, R. G. (1 GS)†	Latrobe, Pa.
Wolfe, L. S. (1 A)†	Orangeburg
Wolfe, S. A. (2 A)	Spartanburg
Wood, H. A. (2 E)	Seneca
Woods, L. D. (4 EE)	Owings
Woodside, J. P. (4 T)	Greenville
Woodward, J. H. (4 GS)	Clemson College
Woodward, R. S. (3 A)	Williston
Workman, H. B. (1 C)†	Goldville
Workman, W. M. (1 T)†	Clinton
Wray, C. V. (1 T)†	Clemson College
Wright, J. E. (1 V Ag Ed)†	Woodruff
Wrinn, J. J. (3 A)	Westminster
Wyse, J. F. (1 V Ag Ed)†	Columbia
Yarborough, J. H. (1 A)†	Jenkinsville
Yarborough, W. B. (2 C)	Bookman
Yarbrough, A. G. (3 GS)	Clemson College
Yarbrough, L. I. (1 T)†	Scranton
Yonce, R. M. (4 T)	Johnston
Yonce, W. L. (1 E)†	Edgefield
Young, M. S. (3 Ar)	Fort Mill
Zalants, E. L. (1 E)†	Greenville
Zimmerman, C. L. (S)†	Westminster
Zimmerman, E. T. (3 T)	Woodruff
Zorn, W. H. (1 GS)†	Denmark

SUMMARY OF ENROLLMENT BY CLASSES AND COURSES 1934-1935

CLASS	Agriculture	Agricultural Engineering	Chemistry	Architecture	Engineering Unclassified	Electrical Engineering	Mechanical Engineering	Chemical Engineering	Civil Engineering	General Science	Textile Engineering	Textile Chemistry and Dyeing	Weaving and Designing	Voc. Agricultural Education	Industrial Education	TOTALS
Senior	38	5	13	3		26*	6*		11	17	8	8	4	9	5	152
Junior	48	5	12	13	52				15	25	29	19	1	10	6	235
Sophomore	67	7	15	5	71			3	13	49	54	16		11	2	313
Freshman	105	14	14	11	146			24		57	121			21	4	517
Special & Irregular																17
Total	258	31	54	32	269	26*	6*	27	39	148	212	43	5	51	17	1234

* Includes one student registered in both the Electrical and Mechanical Engineering courses.

ENROLLMENT BY COUNTIES AND STATES FOR 1934-1935

County	*Total*
Abbeville	24
Aiken	28
Allendale	10
Anderson	97
Bamberg	8
Barnwell	8
Beaufort	6
Berkeley	7
Calhoun	4
Charleston	64
Cherokee	8
Chester	26
Chesterfield	16
Clarendon	5
Colleton	24
Darlington	27
Dillon	14
Dorchester	6
Edgefield	14
Fairfield	23
Florence	38
Georgetown	10
Greenville	87
Greenwood	29
Hampton	19
Horry	11
Jasper	10
Kershaw	12
Lancaster	14
Laurens	41
Lee	18
Lexington	12
Marion	22
Marlboro	11
McCormick	10
Newberry	15
Oconee	62
Orangeburg	23
Pickens	64
Richland	46
Saluda	16
Spartanburg	57
Sumter	17
Union	16
Williamsburg	8
York	33
Total—South Carolina	1120

State or Country	*Total*
Alabama	2
Connecticut	2
Florida	14
Georgia	47
Illinois	4
Iowa	1
Kentucky	1
Maryland	1
Massachusetts	1
Missouri	1
New Hampshire	1
New Jersey	3
New York	7
North Carolina	22
Pennsylvania	3
Republic of Domingo	2
Virginia	1
West Virginia	1
Grand Total	1234

GIFTS AND BEQUESTS

Technological education and scientific research have been advanced, not only by public support, but also by many private benefactions. Gifts and cooperation from individuals to Land-Grant colleges have been generous and are increasing.

Clemson College was founded upon private munificence. Thomas G. Clemson bequeathed the bulk of his estate to the Trustees for advancing higher education based upon the sciences. The Y. M. C. A. was constructed by funds from private sources, Mr. John D. Rockefeller contributing $50,000, and friends of the college subscribing $25,000. Another friend made donations of $25,000 for the Poultry Plant and $10,000 to aid in a building at a branch Experiment Station. Colonel D. K. Norris, one of the original Trustees, bequeathed a block of cotton mill stock to endow a medal awarded annually for scholastic excellence. Clemson alumni are raising funds for a Physical Education Building. Materials and equipment for both research and instructional purposes have been donated by interested persons; student loan funds are being increased. These loan funds are all larger now than when first donated. Recently a donation of $2,000 was made, establishing a scholarship.

Clemson College is largely supported by the State of South Carolina, but the College is in need of funds in addition to these appropriations. For scientific research in agriculture, engineering, chemistry and dyeing, and textiles, private donations could be used advantageously. Funds are also needed for an Agricultural Building, a Hospital, a Textile Building, a Dormitory, and a Physical Education Building. Many worthy young men are seeking aid through loan funds. An association has been organized for the purpose of receiving and administering such gifts. Gifts or bequests for these or other purposes, in whatever amounts, will be carefully administered. Recently $10,000 was donated to establish endowed fellowships for Clemson graduates in Botany and Entomology.

The following form is suggested as a proper legal form to be used for testamental bestowment of funds:

I hereby give and bequeath to the Trustees of Clemson Agricultural College for the use of the Clemson Agricultural College (The A. & M. College of South Carolina) Clemson College, South Carolina

---------- *Dollars* ($)

for the purpose of----------

Signed----------

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